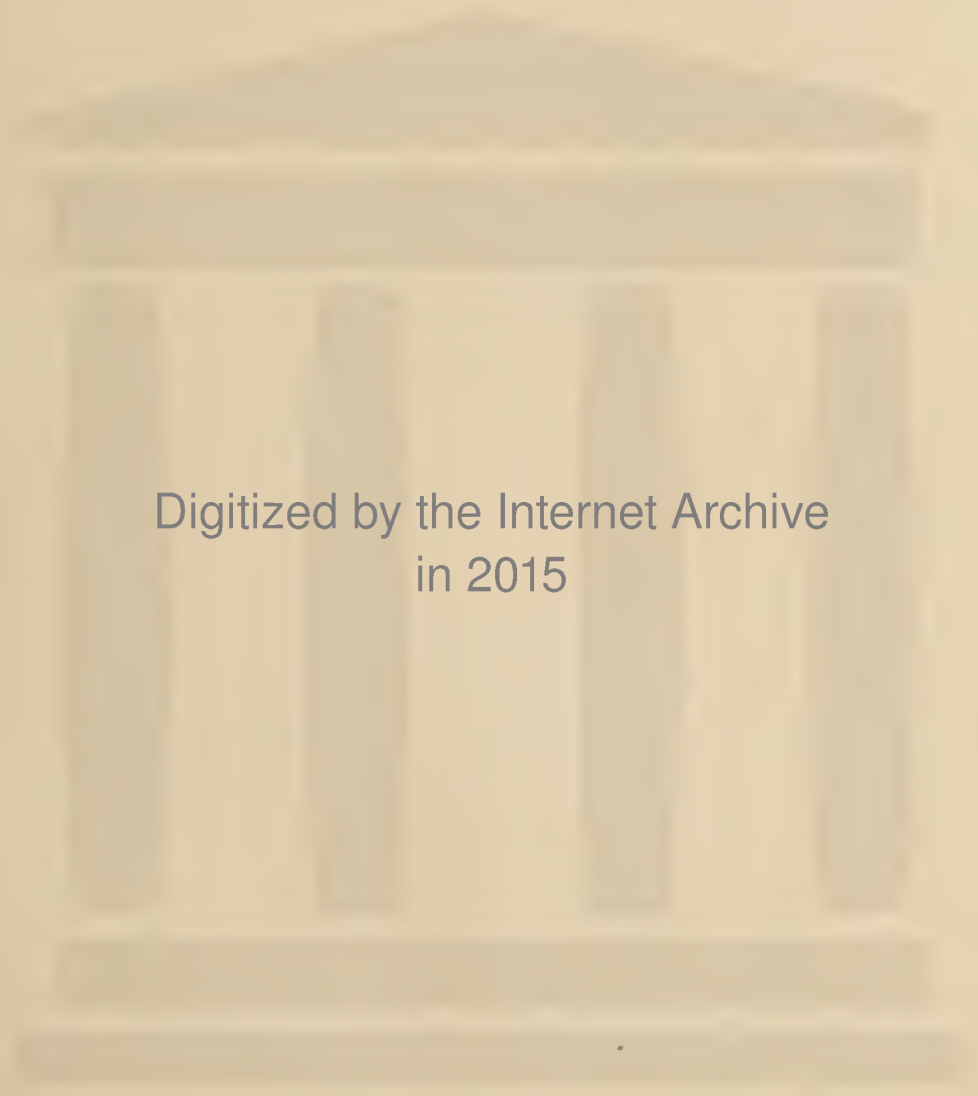
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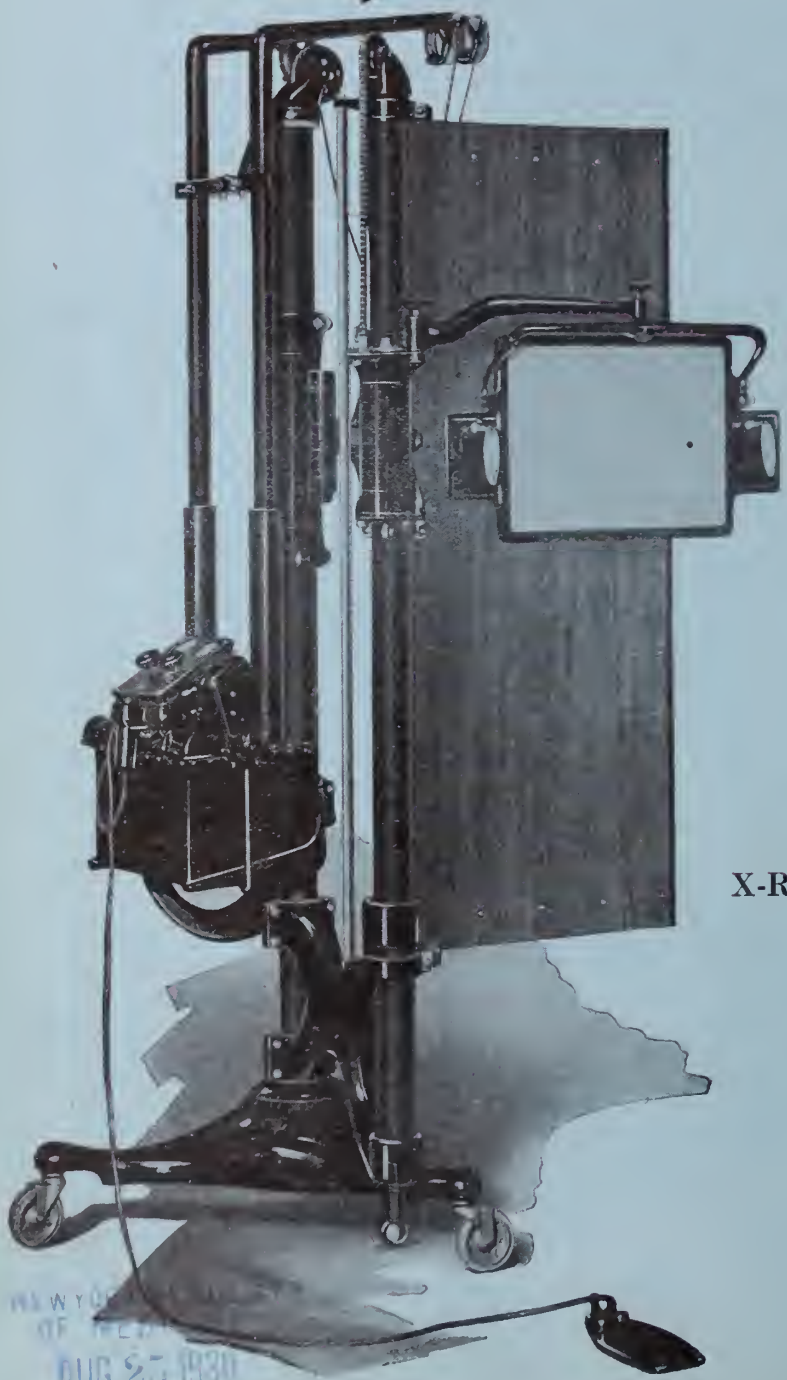
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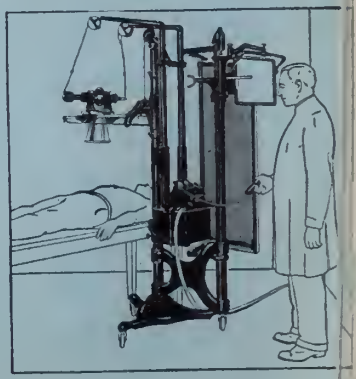
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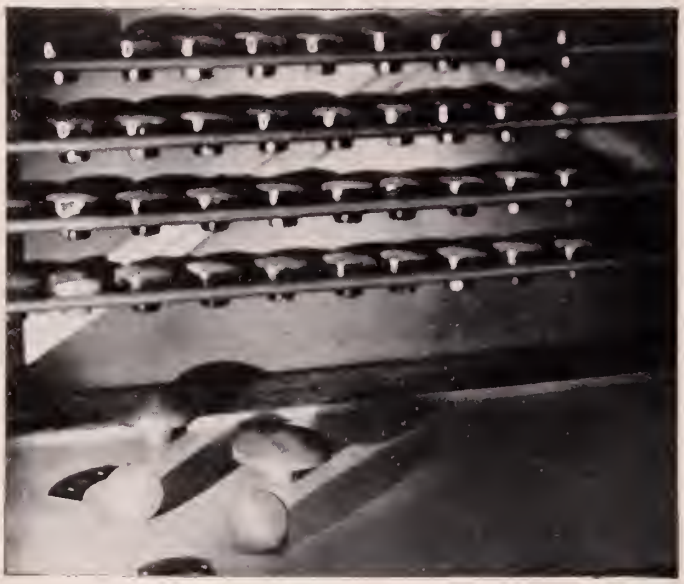
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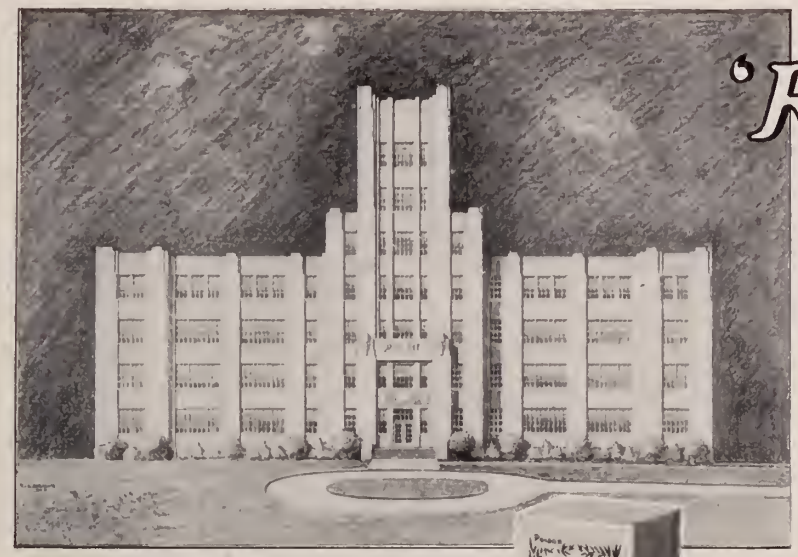
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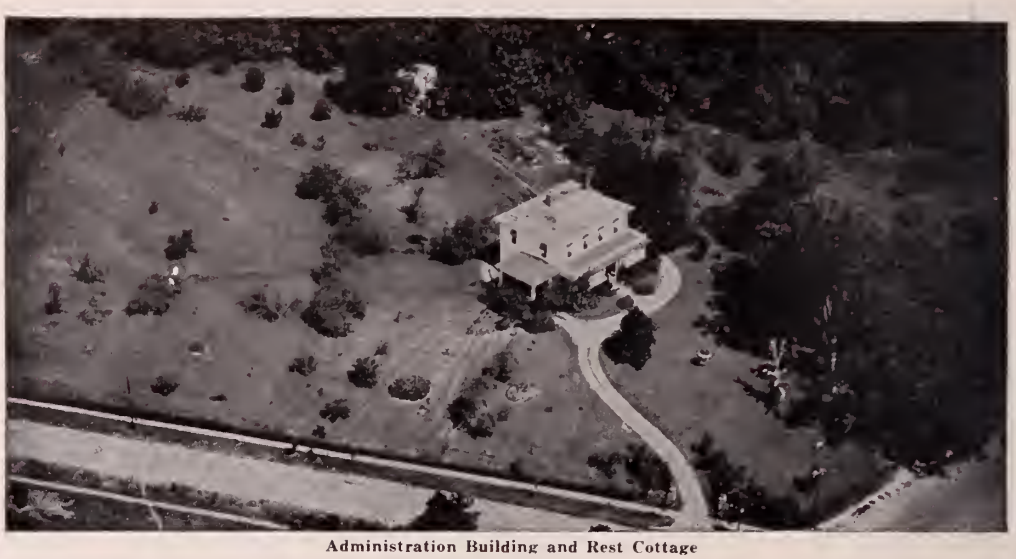
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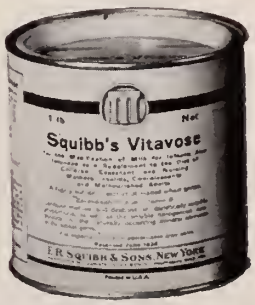
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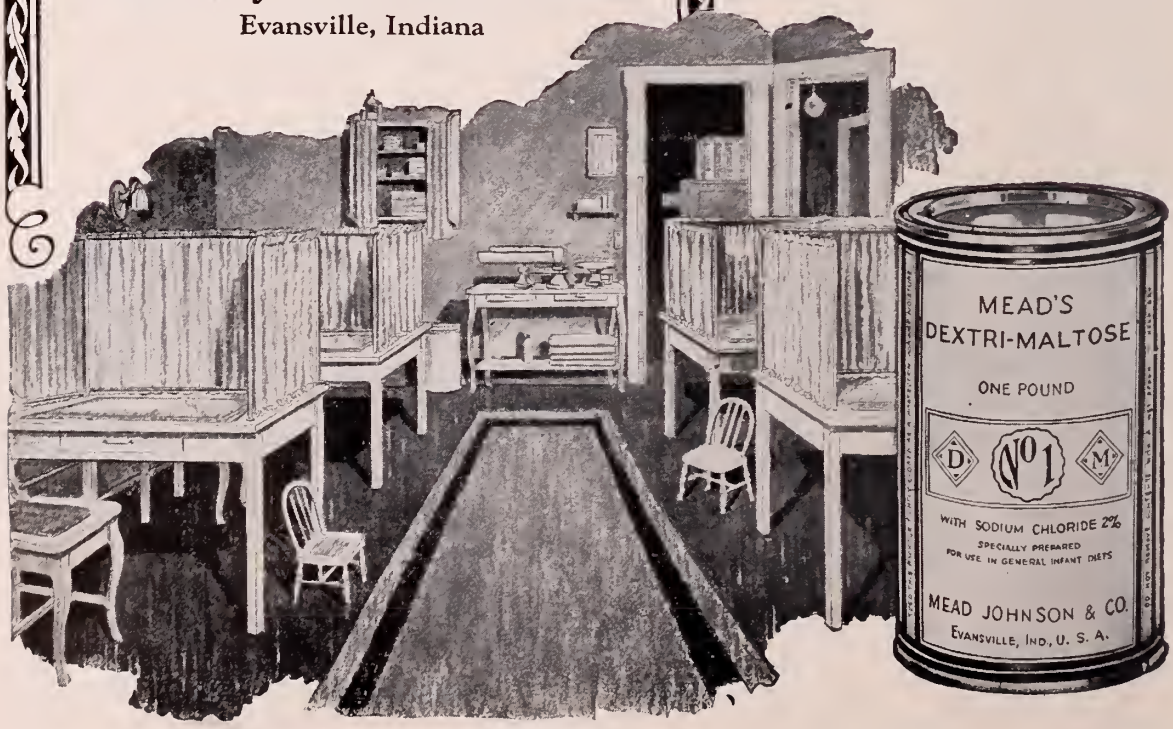
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SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE*

JOHN S. HELMS, A.B., M.D., F.A.C.S.,
Tampa.

The incidence of exophthalmic goitre as well as adenomatous disease of the thyroid gland seems to be on the increase. The importance of and the interest in the subject of their treatment has assumed an increasingly serious aspect.

My interest in this subject began in 1911, since which time I have done approximately eight hundred operations upon the thyroid gland. My own experience in the practical application of the fundamental principles then known and since discovered by those interested in this field shall form the basis of this paper. In this discussion simple and toxic adenomata will be included.

Whatever one's attitude may be towards the future possibilities for the development of some other method of treatment of Graves' disease, one is convinced in the face of preponderant evidence that, at the present time at least, surgical treatment is the more certain and safer cure. This attitude towards surgical treatment is not changed by any opinion one may have with respect to the undetermined question as to whether Graves' disease is a constitutional disease with major local activities in the thyroid and associated ductless glands, or whether it is primarily a disease of the thyroid gland with general constitutional manifestations.

Our concept of exophthalmic goitre, or Graves' disease, may be clarified by stating a definition made by Bram, who regrets the use of the term exophthalmic goitre as a synonym for Graves' disease. His definition follows:

"Graves' disease is a chronic, rarely acute, neuro-endocrine disfunction, characterized by an increased basal metabolism, loss of weight, tremor, emotionalism, persistent afebrile heart hurry, weakness, dermographia and usually (not constantly), by hyperplasia of the thyroid gland and by exophthalmos."

This definition may be safely used as a diagnostic yardstick. Surgical treatment should be determined upon as soon as the diagnosis is established.

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

Dangers of Operation

There are certain factors connected with the operation which contribute to the operative risk. These factors have to do first, with technical errors, chief among which is injury to the recurrent laryngeal nerves resulting in abductor paralysis of the vocal cords. Other dangers from technical errors may be listed as follows: hemorrhage during or following operation; injury to the parathyroids and trachea. Lack of judgment in the proper selection and administration of anesthetics is a potential danger.

Second, the operative mortality may be greatly increased by acute postoperative hyperthyroid crisis. The third factor in postoperative mortality may be due to debility as a result of acute unrecovered preoperative hyperthyroid crisis or continuous chronic hyperthyroidism with loss of weight, general weakness and visceral changes resulting particularly in myocardial weakness and lowering of the kidney function. A proportion of these cases may die of pneumonia. Embolism is a rare postoperative accident.

The operative mortality in exophthalmic cases in the hands of the most experienced surgeons employing all the means known at present to make the operation safe, probably ranges from five-tenths to one per cent. The mortality in toxic adenomata cases runs higher as a rule. Conscientious regard for human life should deter the unexperienced from invading the field of goitre surgery, except in association with the experienced.

Preoperative Preparation

Preoperative preparation should depend upon the kind of goitre and the condition of the patient to be operated upon. The nontoxic adenomata cases need no operative preparation, other than that used for any simple surgical procedure in any otherwise normal patient.

The toxic adenomata cases present the most difficult problems of any type of goitre cases. These problems are not as yet well understood, therefore are difficult to meet. The toxic adenomata cases are usually more chronic, in which beginning mild toxic conditions have persisted for a long time, gradually increasing in severity until myocardial and other changes have taken place to a dangerous degree. Kidney function

may be impaired. There are changes in the nervous system. The preoperative preparation must take into consideration these changes. The general debility is often well marked.

The exophthalmic cases should be carefully prepared and the successful outcome of the case, both insofar as the operative mortality is concerned and the final cure, may rest largely upon the proper preoperative preparation. Frequent metabolism rate studies should be made and recorded. Cases persistently presenting high metabolism rates should be most cautiously prepared. Since the introduction by Plummer in 1922, of iodine as a means to reduce metabolic rate, lower the pulse and quiet the patient's nervous condition, the preparation of these cases for operation has been much simplified and the operative mortality reduced to almost nil.

Since the use of iodine has been practiced, preliminary ligations and stage operations have been almost entirely discarded. The postoperative hyperthyroid crises have almost entirely disappeared, or been reduced to mild types and a minimum. Iodine should be given in large doses, as much as from thirty to sixty minims, or more, of Lugol's solution daily until the metabolic and pulse rates have been reduced and nervous excitability allayed to a minimum. This should be done rapidly—within ten days to two weeks. The maximum effect of iodine is probably reached in about this time. The patient should then be operated upon. Iodine should be continued through the operation and from three to six days immediately following the operation.

There is much difference of opinion as to the value of iodine in the toxic adenomata cases. My own experience leads me to believe that iodine is quite as valuable in the acute toxic states arising in the course of a quiescent adenoma as in the exophthalmic cases. In the chronic type of slowly developing toxic states in adenomata cases, in which there have occurred marked myocardial, kidney function and nervous system changes, iodine is of no value but may be harmful. The use of digitalis as a preoperative preparatory measure is not indicated in the exophthalmic type, or acute toxic adenomata types, but may be of value in sustaining a heart which has undergone myocardial changes in chronic toxic cases.

The Psychological Management

The psychological management of the individual is important. It is highly necessary for the patient to have absolute confidence in the surgeon. The surgeon should have a good working knowledge of practical psychology. Psychologic control of the patient is absolutely essential. Fear of the operation should be dissipated from the patient's conscious mind. Frankness in dealing with the patient is necessary. I am convinced that the patient should be told, in an encouraging manner, the essential details of the management of his case. This is calculated to dissipate fear and inspire confidence.

In the highly toxic cases of both exophthalmic and the adenomatous types, with myocardial weakness and high metabolic and pulse rates, rest in bed for ten days to two weeks is of much importance. It is best, however, to allow the patient to be up and about several hours each day for three or four days immediately before the operation. This seems to increase their strength and restore a more normal bodily function.

The Anesthetic

There is good reason based on experience for giving a small preoperative dose of morphine, say 1/6 grain with atropine 1/200 gr. The atropine may be omitted if the operation is to be done under local anesthesia alone. The morphine seems to allay fear and mental distress of the patient as well as to reduce the extreme hypersensitiveness of the highly toxic cases. Atropine is of special value to reduce the annoying secretion of mucus, which interferes with respiration by obstruction where general anesthesia is used. The preanesthetic narcotic should be given about forty-five minutes before operation begins.

The choice of anesthetic is to be determined largely by the skill and experience of the operating surgeon, the skill and experience of the available anesthetist and the type of case to be operated upon. In nontoxic adenomata cases, particularly those in which a solitary tumor is found, local anesthesia is very satisfactory, and general anesthesia should only be resorted to for special reasons. In the toxic adenomata cases, as well as the hypersensitive, excitable exophthalmic cases, general anesthesia combined with local anesthesia is the most satisfactory. The general anesthetic of choice is nitrous oxide with oxygen. In the hands of the experienced anesthetist, it is always safe. It has been my practice to give nitrous oxide with oxygen to the degree of primary anesthesia, or the analgesia of Crile, reducing the patient thereby to a state of mild subcon-

sciousness and supplementing this with novocain for abolishing pain. One-half of one per cent for the subcuticular tissues and one per cent for the skin is used. A small amount of adrenalin added does no harm and enhances the local effect of the novocain.

The Operation

The operating personnel should consist of anesthetist, two experienced assistants, two nurses —prepared as the surgeon and assistants, and a circulating nurse. The operating assistants, as well as the nurses, should be experienced in goitre surgery and prepared not only to assist efficiently under normal circumstances, but to meet any emergency that may arise.

The position of the patient upon the operating table should be such as to expose the operative field to the best advantage without imposing a strain upon any part of the body. The dorsal position at an angle of about 30 to 45 degrees, with head lowered upon a rest so as to expose the anterior neck and with the feet firmly supported by a foot rest, gives the patient an easy position and a proper exposure of the field of operation.

The skin may be prepared as for any other aseptic surgical procedure. I prefer a preliminary cleansing with ether, to be followed by the application of a coat of equal parts of U. S. P. tr. iodine and purified benzine. This dries immediately.

In general, where the case is one of hyperplastic goitre with hyperthyroidism and the surgeon contemplates a subtotal excision of the gland, the Kocher collar incision is made. In large adenomata of unusual location, other types of incision may be employed to fit the necessities of the given case.

The collar incision should be made fairly low, so as to make it possible for the scar to be obscured by a string of beads in case of its being unsightly. The skin incision should be made with the scalpel applied at a right angle to the skin. The incision should be extended through the skin, superficial fat and the platysma muscle. A flap containing these structures should be turned upward and downward, exposing the underlying ribbon muscles, the anterior jugular and median veins. Care should be taken not to injure these vessels.

A longitudinal separation of the ribbon muscles is now made in the midline, exposing the underlying gland after having placed self-retaining retractors to hold the upper and lower flaps. The larger lobe is now shown and the upper pole is exposed by separation of the ribbon muscles from the lobe and lifting the gland upward with some form of short toothed or tenaculum forceps and retracting the muscles over the upper pole, exposing the vessels which are double clamped and cut between forceps. The lobe is then delivered and dissection is begun along the outer border of the posterior capsule, double clamping all vessels as they are approached. A small amount of gland tissue is left with the posterior capsule.



Fig. 1. The collar incision through the skin, superficial fat and the platysma muscle with dissection of the upper flap.

This dissection, which should be free hand, is continued down to the lower pole which is lifted up and the inferior thyroid vessels grasped within the capsule and well away from the trachea, leaving a safe amount of gland tissue at the lower pole to insure against injury of the recurrent laryngeal nerve. The gland is now dissected up to the trachea, avoiding removal of th tracheal fascia, which is important in order to prevent injury to the trachea.

If the opposite lobe is to be removed, the isthmus or middle lobe is dissected from over the trachea and the same procedure as opposite carried out upon the remaining lobe. All vessels should be double clamped before being divided.

Care should be taken to avoid the parathyroid bodies as well as the internal jugular veins. Keeping within the posterior capsule will fairly well insure against these accidents.

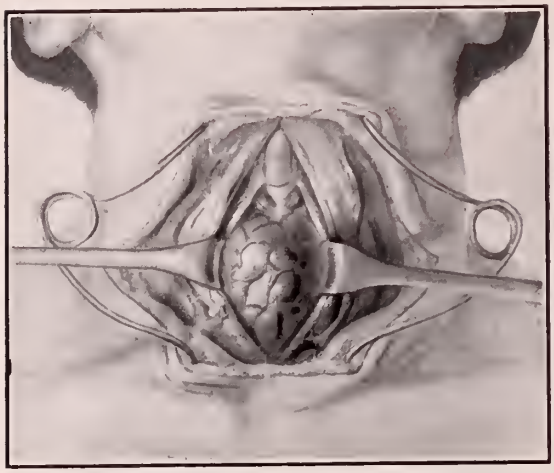


FIG. 2. Dissection of upper and lower flaps, completed. Flaps retracted with Sloan's self-retaining spring goitre retractors, with separation of the ribbon muscles longitudinally in the midline almost completed, showing the underlying enlarged thyroid gland.

After all clamped vessels are tied, the edges of the posterior capsule should be brought together with fine catgut on each side. The ribbon muscles should then be sutured with continuous catgut sutures. If hemostasis is certain, the platysma is sutured with plain catgut, lock stitch, beginning at the patient's right and when completed returning from angle of wound at patient's left with same strand of suture, making an intradermal continuous stitch uniting skin edges back to starting point where the two ends of the suture are tied subcuticularly.

The careful approximation of the platysma muscle removes tension from the skin suture and insures a scar that will be almost invisible if skin is approximated. I have found no advantage in dissecting up the skin flaps and dividing the platysma longitudinally with the ribbon muscles. This method has the disadvantage of making the exposure of the gland more difficult.

The question of drainage is not an important one. I do not drain at present, except in face of infection or potential infection, or other exceptional circumstances. In my early experiences I drained most of the cases. The habit has grown less, until now I have ceased to drain.

Postoperative Treatment

The avoidance of postoperative hyperthyroid crisis is controlled almost entirely by the use of iodine. Lugol's solution is given in five per cent glucose solution by proctoclysis, about 4 cc. being added to each litre of glucose solution. This amount is given every four to six hours until patient is able to take iodine by mouth.

The administration of copious quantities of fluids by proctoclysis, by hypodermoclysis and by mouth is an important part of the postoperative treatment to prevent dehydration and to supply food. Fruit juices, particularly orange juice, are especially beneficial. Hot tea or coffee with sugar is very valuable.

The position in bed should be one of comfort. The semi-sitting posture seems the most favorable. The bed should be angulated at the knees to promote comfort.

Ice bags applied to the precordium quiets the heart and has a tendency to quiet restlessness and removes heat produced by rapid oxidation. Patient should be lightly covered. The room should be well ventilated and more or less darkened and visitors excluded. Drugs to promote quiet and sleep are important. Morphine is essential when hyperthyroid crisis is imminent or present. The barbituric acid compounds are indicated to produce sleep when hyperthyroid crisis is absent.

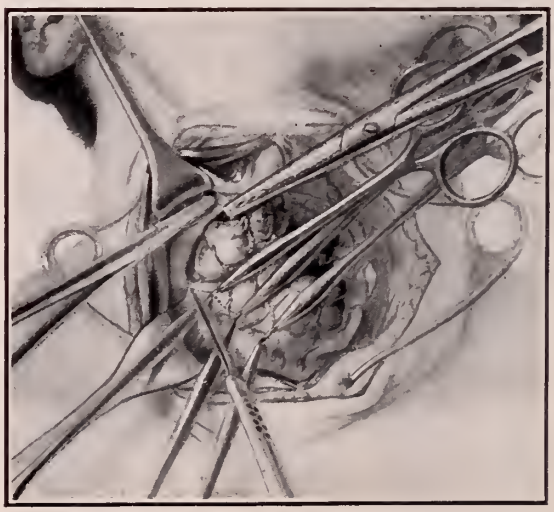


FIG. 3. Exposure of right lobe of enlarged thyroid gland with ribbon muscles retracted to right with small blunt bladed retractor, the upper pole completely mobilized and exposed and the superior thyroid vessels clamped and divided between clamps and beginning division of the thyroid capsule on a line about the juncture of its anterior two-thirds with the posterior third longitudinally, showing the vessel clamped along the line of capsule division.

Postoperative Complications

Injury to the recurrent laryngeal nerves producing abductor paralysis of the vocal cords is

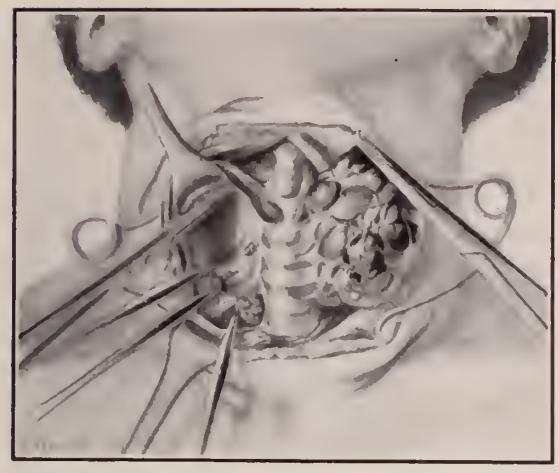


FIG. 4. Completed dissection of right lobe with most haemostats removed and small amount of the gland tissue clinging to the posterior capsule and a small portion of gland left with the lower pole. The right lobe now being rotated intact over the trachea, leaving the tracheal fascia intact with approach to left enlarged lobe for removal of right lobe and isthmus and left lobe en masse.

the most potent danger to be considered. These injuries may vary from slight trauma to complete severance of one or both nerves. The evidence of injury varies accordingly from slight hoarseness and dyspnea to complete aphonia and finally asphyxiation. It is probably true that most cases of so-called collapse of the trachea are really complete paralysis of the vocal cords producing asphyxia. Immediate tracheotomy meets the indication for saving the patient's life.

Injury to the trachea is to be carefully avoided by keeping in mind constantly as the operation proceeds its exact location. The tracheal fascia should be preserved: this largely obviates tracheitis and possible bronchitis and pneumonia.

Postoperative hemorrhage is avoided by careful hemostasis at the time of operation and should not be a serious postoperative complication. Its occurrence should be immediately recognized and the wound promptly reopened, clots removed and bleeding vessels secured.

Injury to the parathyroid bodies or their complete removal may produce tetany which is easily recognized by tonic contractions of the muscles of the fingers and hands, finally, in severe cases, convulsions. This condition should be treated by administration of large doses of calcium lactate by the mouth, or calcium chloride solution intravenously or the hypodermatic administration of parathyroid extract (paraharmone), Collip.

Embolism is of rare occurrence as a postoperative complication. Pneumonia may result in cases of general debility. Infection should not be a complication where aseptic technique is carefully observed.

Prognosis

Recurrences in the adenomata cases should be no more than two per cent. The recurrences in the exophthalmic cases vary from about 1.5% to about 16%. Recurrences are more frequent in the young subject and rarely occur after the age of 40 years. The recovery prognosis in the exophthalmic cases depends largely upon the amount of gland removed and the carrying out of a proper postoperative regimen. This postoperative regimen should be directed towards insuring a diet of high caloric value and high vitamine and calcium content. Freedom from nervous excitations, mental strain, worry and anxieties as well as avoidance of physical fatigue, contribute largely to complete recovery without recurrence. The judicious use of iodine and thyroid substance is sometimes indicated.



FIG. 5. Operation completed with suture of continuous lock stitch catgut closure of the platysma with beginning intracuticular closure of skin with same suture with long, keen, curved hand needle.

Conclusions

1. Surgical excision must be regarded as being the most safe and certain method of treatment of exophthalmic and adenomatous goitres, for the present at least.

2. Insurance of immediate safety in the operation depends largely upon proper preoperative preparation.

3. Iodine should be given in large doses in all exophthalmic cases with high metabolic and pulse

rates and nervous excitability and in all acute conditions of hyperthyroidism in toxic adenomata cases.

4. Iodine is of doubtful value and probably harmful in chronic toxic adenomata cases with marked myocardial and kidney function changes. Digitalis in this type is probably valuable.

5. The operation and its immediate management should be carried out with meticulous care as to technical details.

6. Cure is dependent upon leaving only a small amount of the gland, together with a strict postoperative regimen including high caloric diet, freedom from nervous excitation and physical fatigue with the use of iodine or thyroid extract judiciously as indicated.

BIBLIOGRAPHY.

Bartlett, Willard: Surgical Treatment of Goitre. C. V. Mosby Co., p. 169 et seq., 1926.

Bram, Isreal: Endocrinology, 12:190.

Collip, J. B.: The Extraction of a Parathyroid Harmone, which will prevent or control Parathyroid Tetany and which regulates the level of blood calcium. J. Biol. Chem., 63:395, 1925.

Crile, G. W.: Surgical Treatment of Goitre. Radiology, 6:365-367, 1926.

Goff, Wm. R.: Surgical Treatment of Goitre. The West Virginia Medical Journal, 23:24-26, 1927.

Hellwig, C. Alexander: Morphological changes in Exophthalmic Goitre following the use of Lugol's Solution, Surg. Gyn. & Obst., 47:173-179.

Hertzler, Arthur E.: Technique for Thyroidectomy. Surg. Gyn. & Obst., 47:225-234, 1928.

Jackson, Arnold S.: Iodine as an Aid in Hyperthyroidism. Journal Mich. State Medical Society, 27:645, 1928.

Jackson, Arnold S.: Thyroidectomy. Surg. Gyn. & Obst., 46:547, 1928.

Lahey, Frank H.: Indications for Surgical Treatment of Goitre, Radiology, 6:368-371, 1926.

Marine, David: Diseases of the Thyroid Gland: Treatment and Prognosis. Tice's Prac. of Med., vol. viii, p. 250-255.

Mosser, W. B.: The Effect of Iodine and Thyroid Feeding on the Thyroid Gland; an Experimental Study. 47:168-173, 1928.

Pemberton, J. De J.: Mortality in Surgery of Exophthalmic Goitre. Surg. Gyn. & Obst., 36:458, 1923.

Pemberton, John De J.: Causal Factors in the Surgical Treatment of the Exophthalmic Goitre. New York State Journal of Med., 28:256-261, 1928.

Plummer, Henry S. & Boothby, Walter M.: The Value of Iodine in Exophthalmic Goitre. Collected papers of the Mayo Clinic and the Mayo Foundation, 15:565, 1923.

DISCUSSION

Dr. John E. Boyd, Jacksonville:

Dr. George Crile visualized the true status of the toxic thyroid in the following statement: "The patient with hyperthyroidism presents a general medical and surgical clinic, including all the specialities. The tissue pathologist and physiologist studies the histology of the thyroid gland; the chemical pathologist studies the thyroxin content of the gland or the chemistry of tetany; the biochemist identifies the chemical changes in the blood and the fluids of the body; the dermatologist copes with the loss of hair and the main skin lesions, such as furuncles, leukeplakia, rashes, etc.; the orthopedist observes the lesion of the joints and cartilages; the laryngologist observes the voice changes, and studies the infected tonsil relation to the disease; the cardiologist copes with myocardial changes and with fibrillation; the gynecologist and the obstetrician find menstrual disorders, senility, or they deal with the complication of pregnancy; the difficulties encountered by the oculist include exophthalmes and functional eye disturbances; the gastro-enterologist meets diarrhea and vomiting; the dentist searches for focal infection and finds the structure of the teeth altered; the psychiatrist finds every phase of psychic disturbance up to insanity; the roentgenologist identifies the intrathoracic goitres; the internist must differentiate hyperthyroidism from psychoneurosis, from masked tuberculosis, from neurocirculatory asthenia, from chronic fatigue, from endocarditis, etc., and finally the surgeon finds his judgment, his technical skill, and his hospital organization taxed to the utmost in the treatment of the disease." The longer I contact with these cases the more I appreciate this summing up by the greatest living authority on this subject.

No routine preoperative treatment will yield satisfactory results in all cases. I am convinced that *the understanding* internist should be in control of the treatment up to the time of operation. He should, however, have the surgeon in daily consultation and receive his advice and council with grave consideration.

Marine believes that the one basic condition which is universally present in any type of goitre is a disturbance in the metabolism of iodine. If this be so then the various types of hyperthyroidism—the exophthalmic, the toxic adenoma, the myocardial and the cardiovascular—are due to variations in the response of the various organs and tissues of the individual organism to the presence in the organism of an abnormal amount of the thyroxin—a specialized iodine compound. Also it has been shown that the state of hypothyroidism is also a state of hyperadrenalism—for both adrenalin and iodine in themselves increase metabolism, increase blood pressure, increase the volume and rate of the pulse and respiration, produce leukocytosis, increase sweating, and lower the myoneural threshold. Viewed from this standpoint the preoperative treatment is con-

cerned in the removal of every factor which may contribute to the adrenalism—iodism syndrome. Heart reserve, basal metabolism and blood pressure will require careful study over a period of time by the expert. I wish to condemn the growing tendency to intrust the running of a basal metabolism entirely to a technician. The metabolism machines are by no means fool-proof or perfect, but subject to various mishaps, which can only be avoided by the understanding physician who has a general knowledge of the case under his care.

The internist, the hospital personnel and the surgical team must be prepared to meet the indications in each individual case, and not only that, but to meet the often swiftly changing indications presented by each case. There are broad fundamental principles which govern the course of treatment, but there can be no rules as to when and how to apply them. As for the operation itself, however, one rule stands—in doubt, wait.

Dr. J. W. Snyder, Miami:

It is often said that doctors cannot agree, but after hearing Dr. Helm's paper nothing is left but full accord with the author's presentation of the subject.

Many men have contributed to the perfection of the operative technique of thyroidectomy, but to H. S. Plummer alone belongs the credit of devising a method for the control of the hyperthyroid reactions. The use of iodine as first introduced by Plummer in 1922 has not only been a most effective means of preparing the patient for operation but has virtually eliminated the intense postoperative crises which frequently caused death within a short time after operation. As mentioned by Dr. Helms, preliminary ligations are now seldom necessary and the operative mortality in exophthalmic goitre has been very materially reduced. Iodine should, however, only be used as a preliminary to surgery, for the continued administration of the drug cannot be expected to cure the condition and the longer the duration of hyperthyroidism the more extensive are the visceral degenerative changes and the poorer the final outcome.

The physical state of the patient and the extent of abatement of the symptoms of hyperthyroidism are important factors in deciding as to when a patient is ready for surgery. Basal metabolic rate determinations are extremely important in checking clinical findings and offer much information as to the risk involved.

The risk of postoperative tetany I believe has been greatly exaggerated. I have only seen two such cases and both were readily controlled by calcium.

The two major errors in technique are hemorrhage and injury to the recurrent laryngeal nerves. Hemostasis must be exact and it is well to test this before the wound is closed by having the patient cough and strain. A more recent appreciation of anatomical relations has helped surgeons to avoid trauma to the recurrent laryngeal nerves. It was commonly thought that the course of these nerves was just posterior to the capsule of the gland and for this reason the posterior capsule was preserved and the trachea and its fascia well bored. Now we know that the nerves pass mesial to the gland and that by leaving the postero-mesial portion of the gland and capsule and not boring the trachea, injury to the nerve is unlikely. Lastly I wish to compliment the author on a very excellent paper.

Dr. John S. Helms, Tampa (closing):

I want to assure those who have discussed my paper of my high appreciation for their liberal discussions.

I appreciate the position that Dr. Boyd assumed with respect to the subject insofar as careful study of the given case is concerned by a group capable of making the proper examinations and arriving at the proper conclusions. However, in many cases there is not time to do all of the things that would seem ideal, because the patient's life has to be saved from his hyperthyroidism.

With respect to the possible error in basal metabolism rate tests; the essayist went on the assumption that there would be no laxity in any work that was done by anybody in connection with the case before the operation was done.

My paper included postoperative care, but did not have time to read all of the paper. Those who are interested in that particular phase of the subject will find that I have laid down a postoperative regimen to be followed up in order to assure the final cure of the patient after the operation has saved the patient's life.

SURGERY IN THE DIABETIC*

A. M. C. Jobson, M.D., F.A.C.S.,
Tampa.

Formerly there were few diabetics because their span of life was short and limited by their two chief enemies, acidosis and undernutrition. Since these two factors have been eliminated, today there are many diabetics, and they live longer because insulin has set them free. Surely every third diabetic, and probably every other diabetic at some time in the course of his disease needs the surgeon and will seek his aid.

Diabetics for many years have been looked upon as poor surgical risks, and have been approached with a certain amount of trepidation, although since the introduction of insulin by Banting and Best, with the cooperation of Dr. MacCleod, the mortality of the diabetic has been lowered so that at the present time, insofar as his diabetes is concerned, he is no poorer a risk than any nondiabetic with a similar trouble.

Briefly, let us consider the major reasons why a diabetic is such a poor risk:

1st. Most cases are found in patients of forty years of age and above, in the majority of which arteriosclerotic, cardiac and renal affections are present. The further advanced in age, the more pathological changes we have in the heart, blood vessels and kidneys.

2nd. They have a delayed healing which we know is due to an elevated blood sugar.

3rd. Susceptible to infection, though this is questioned by some authorities.

Let us first consider the outlook of the surgical diabetic of two decades ago. Philips, writing in The Lancet, May 10 and 17, 1902, says:

"No operation save of the extremist urgency is to be performed if there is over one gram of ammonia excreted in the twenty-four hours until this has been reduced to the normal amount. An operation should be postponed if there be aceto-acetic acid in the urine, although the ammonia be not markedly increased. Much albumin in the urine is a bar to operation.

"If serious disease of other organs, such as the liver, kidneys, etc., be present, an operation should be avoided. Rapid wasting in a stout diabetic not obviously dependent on the surgical lesion demanding treatment should be a reason for postponing an operation until the general condition is improved.

"An operation should be performed: (First) for malignant disease, if apart from the diabetics, such would be urged. (Second) In the case of large abdominal tumors, especially in females. (Third) In diabetics in good health without extensive arterial or nerve degeneration, cosmetic operations may be performed, especially in females. (Fourth) An emergency operation is to be undertaken even in the most unfavorable circumstances, but a guarded prognosis is to be given."

Contrast this to the present day situation at the Mayo Clinic where no diabetic is denied indicated surgery. When an operation is indicated in a diabetic, the urine should be rendered free of acetone and of all but traces of sugar by means of diet, and insulin, where no blood chemistry is available, but entirely sugar free and a normal blood sugar when blood chemistry is available and time permits. Insulin therapy seems to be somewhat dangerous in patients with severe atherosclerosis on account of the variations in blood pressure which it causes.

When a surgical diabetic is not doing well, do not first blame the diabetes. The treatment of diabetes now rests upon so sure a scientific foundation that if the course of the patient is not favorable one must suspect a complication. Remember that here you can and do have the complications of any other surgical patient. Have you some pus, or some latent condition manifesting itself at this time? Remember that diabetes is a good disease, but has bad companions and these have injured her reputation. Attack them, not her.

In the beginning, the therapeutic application of insulin was associated with quite a number of untoward secondary effects. This was found not to be due to the harmone itself but to admixtures of protein.

The ratio or effect, according to V. Noorden, represents an individual equation, and varies according to the individual. It depends upon the age and complicating diseases and upon the varying intakes of carbohydrates. (Minkowski, Strauss).

There is no doubt that the insulin therapy should be directed by the internist and that surgical complications should be treated in close cooperation of internist and surgeon (Schmiedon, Melchior). Nevertheless, the author believes that it is necessary for the surgeon to know how to handle the remedy, not only in coma and in the precomatose stage, but also in the preparatory

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

and postoperative treatment of surgical patients.

It is becoming recognized that operations upon diabetics can be performed without undue risk, provided that glycosuria is in abeyance at the time of the operation, by the application of insulin. To do this practically it is almost essential that you have a general knowledge of metabolism and its disturbances in diabetics. For this reason I shall very briefly sketch this metabolism.

Carbohydrates taken into the body are changed into grape sugar and stored in the liver as glycogen, which is again liberated into the blood stream as glucose to meet the bodily needs.

In the absence or partial absence of the hormone, insulin, in the body, this glucose is not utilizable (oxidizable) and is excreted, unchanged by the kidneys (glycosuria).

Again the protein and fats are only completely utilizable (oxidizable) in the presence of the oxidizing glucose so that there is an accumulation of the aminoacids (products of protein catabolism) and fatty acids (products of the fat catabolism) to which the acidosis and coma are due.

The regulation of the sugar economy has a medullary vegetative center which is assisted by the incretion of the suprarenal gland (adrenaline) and by the pancreatic hormone (insulin).

Adrenaline fosters the delivery of sugar from the liver; insulin fosters its storage, but this maintenance of the glycogen supply in the liver and this construction of glycogen from glucose are not the only tasks of insulin. Insulin also regulates the entire complicated disintegration (intermediate lactacidogen, etc.) in the muscular cell. Evidently there are also intimate relations with the splitting of protein and fat, the details of which are still utterly obscure (intermediate role of lactic acid with regard to the three food stuffs). Protein and fat can be transformed into sugar with an intermediate lactic acid stage.

Now let us proceed to the preparation of the patient before operation.

For this at least a week appears to be desirable, during which acidosis and hyperglycæmia are removed and the patient is brought into nitrogenous equilibrium by appropriate diet, fluid intake and insulin dosage, which naturally varies in each case. These I shall take up and consider individually.

Dict.—The dietetic preparation varies considerably, depending upon the amount of time available before operation. If the surgical disease be one which is not urgent, any well-balanced diet may be selected which will yield about two-thirds of a gram of protein and about one gram of carbohydrate per kilogram of body weight and a total of about thirty-five calories per kilogram per day.

In arranging a balanced diabetic diet, several facts must be kept in mind. The end products of protein metabolism are aminoacids; fifty-eight per cent of these going to make glucose. The end products of fat are fatty acids and glycerol; thus, ten per cent of fat metabolized is available as glucose. All of the carbohydrates in the diet result in the production of glucose.

It is rather essential that the patient be fed up to four or five hours before the time of operation, as an aid to immediate postoperative treatment and surgical shock. If he is too sick to take solid food or is nauseated and unable to take an adequate quantity of milk, an endeavor should be made to give carbohydrate alone as gruels, fruit juices, or lemonade. Whatever the diet selected, if glycosuria persists, it should be abolished by giving insulin.

Fluids.—It is just as important to concern one's self with the fluid requirements of the tissues as with the patient's nutritional needs. Fluids must be forced before operation as well as afterward. Dehydration as a result of operative procedures is common, and under these conditions acidosis is accentuated. Urge the patient to take as much fluid as possible before he is subjected to surgery. The nurse must see that six ounces of water, broth, or coffee, or milk, or orange juice are taken every hour. If unable to retain fluids by mouth, give them in other ways.

Hypodermoclysis of normal saline solution is very satisfactory, although there is some tendency toward slough. Intravenous injection of large quantities of fluids should not be attempted because cardiac disturbance is frequent in elderly diabetics, unless given very slowly, as by the intravenous drip of Matas. Intraperitoneal injections are absorbed rapidly, but have their chief values in children. Rectal instillations of five per cent glucose solution, six ounces at a time, given slowly, will be found to be of great help in getting fluids into the tissues, either before, during or following operations.

Insulin.—When acidosis and hyperglycæmia fail to respond favorably to dietary measures alone, insulin is required; used only as an auxiliary measure, not as an excuse for carelessness in diet. Given twenty-four or even twelve hours' time in which to prepare for operation the patient

can be rendered almost or entirely sugar-free and his acidosis eliminated.

Before giving a patient insulin a urinalysis and a blood chemistry should be made. It must be borne in mind, however, that the urinary sugar is not always an exact indication of the sugar content of the blood. Not infrequently even severe diabetics may have no sugar in the urine, but still have a high blood sugar. This is probably due to a raised sugar threshold in damaged kidneys. Especially when insulin is being used it is advisable to be guided by frequent blood sugar and carbon dioxid plasma content determinations, and the patient and those in attendance must be instructed in the signs, symptoms and treatment of hypoglycæmic shock, which are nervousness, sweating, tremor, feeble pulse, delirium, coma and death.

When an acute surgical condition presents itself and time is an important factor, it is impossible to prepare the patient by a dietary procedure. The chief problem is to operate, and operate at once, leaving the diabetic condition to the internist. Sugar found in the urine before such an operation should not deter the surgeon from performing a careful and complete examination, but should merely serve to urge him to expedite his surgical investigation and exert more than usual skill and dexterity. To prevent the development of acidosis, if this is not already present, or to prevent the onset of diabetic coma if acidosis does exist, is a problem for the internist.

The basic principle constantly to be observed is that clinical acidosis will not develop if sufficient glucose is being oxidized. To counteract a marked acidosis the intravenous use of insulin in twenty to forty unit doses is indicated. The intravenous administration of, say twenty cc. of fifty per cent glucose along with the insulin is a safe and probably advisable procedure, in that the levorotatory blood sugar is not, or much less, rapidly oxidized than the dextrorotatory glucose administered.

We should not neglect to mention that it is just as essential, in operations on diabetics, to select an expert anesthetist as it is to secure the services of a competent surgeon.

The immediate postoperative treatment must be paid special attention as the majority of interventions are followed by symptoms favoring the appearance of a ketone invasion. The period of fasting is unavoidable especially in abdominal operations, the operative dehydration through evaporation of liquid from the exposed peritoneal serosa, vomiting and the wound shock which yields only slowly, act in this direction. An abundant supply of liquid is of the highest importance. This is a universal experience. It is also wise to administer moderate amounts of carbohydrates (40-60 gm.).

As soon as it is possible, the fasting period necessitated by the operation must be concluded (soups, drinks of oatmeal,—Umber and Rosenberg—milk, soft-boiled eggs, orange juice). Complete absence of sugar is not as important as low ketone values, and if ketones appear in the presence of low sugar values, their disappearance is brought about by increase of food sugar and insulin. During this entire period it is to be recommended to examine the urine quantitatively for sugar. Determination of blood sugar at regular intervals, when possible.

Secondary Effects and Dangers

In the secondary effects and dangers it is known that every surgical complication leads to acute aggravation of the disturbed metabolism; therefore, it is not at all exceptional that a diabetic under wise dietetic treatment suddenly falls into coma. Usually the coma gives premonitary symptoms for several days, such as: the intestines become lazy, the patient has no appetite and sleeps much.

At times it is difficult to decide whether coma is due to diabetics or to some other unrelated condition. The presence of sugar in the urine is not sufficient evidence on which to make a diagnosis of diabetic coma. This test must be supplemented by a sodium nitroprusside test for acetone bodies or a ferric chlorid test to determine the presence of diacetic acid, and it is essential to distinguish between true reaction and pseudo-reaction, due to certain drugs which the patient may have taken. Elevation of the blood sugar is always a precursor of diabetic coma.

Summary

The importance of insulin lies in its rapid effect on the ketone poisoning in coma. Mild cases, according to experience, are to be influenced by diet alone.

Insulin allows complete oxidation of the ketone bodies and enhances through this the vitality of the cells. A decisive influence on the surgical complication may be ascribed to it only in combination with the operation. Under the protection of insulin, after a short preparatory treatment which usually lasts only a few hours, the operation may be performed without danger of

coma. In the further course, the issue depends upon the seriousness of the surgical complication in question.

Insulin furthermore affords the possibility of performing radical operations on diabetics, for instance radical extirpations of tumors, whereas formerly palliative operations were made for fear of shock. Indications in diabetics nowadays no longer differ from those in patients with a normal metabolism.

The surgeon should master the insulin treatment in coma without being forced to consult the internist, in order to be able to intervene rapidly if necessary, without losing time waiting for the assistance of the internist. In the preparatory treatment, and in the postoperative treatment the surgeon and internist should cooperate. The surgeon must insist upon having his word to say in the preparatory treatment, so that the favorable moment for the operation is not missed and the patient is not transferred in a condition in which surgery is impotent.

The importance of the dietetic treatment has not in the least been lessened by insulin. Insulin and diet must complement each other.

In nondiabetic acidosis, insulin is of practical importance in a number of cases of dehydration, etc., and in shock. In many of these cases it seems to play a life-saving role.

The surgeon has every reason for regarding the discovery of insulin as his greatest aid in surgery of the diabetic. Insulin has meant even more in surgery of the diabetic than iodine has in thyroid surgery.

A series of cases which would otherwise be lost, can be saved only through this preparation, and its use in selected cases seems to remove the risks altogether. These risks are, briefly, the liability to postoperative infection and the event of coma, and are mainly due to anesthesia and shock, both of which produce the hyperglycæmia, the control of which is the main aim of management.

BIBLIOGRAPHY.

1. Fischer, A. W.: Diabetics, Insulin and Surgery. Ergebnisse der Chirurgie und Orthopædie, 19:1-32, 1926.

2. Orator, V.: Insulin in Surgery, Deutsche Zeitschrift fur Chirurgie, 195:57-68, (March) 1926.

3. Roth, Henry: Surgical Operations on Diabetic Patients. American Journal of Surgery, 39:295-300, (December) 1925.

4. Joslin, Elliott P.: Diabetic Surgery from a Medical Point of View. The Boston Medical and Surgical Journal, 196:127-136, (Jan. 27) 1927.

5. Brown, Herbert H.: Excision of Large Angioma of the Liver in a Diabetic. British Medical Journal, No. 3448:232, (February 5) 1927.

6. Pemberton, H. S., and Liverp, M. B.: Use of Insulin in Operations on the Diabetic. The Lancet, 647-648, Sept. 27, 1924.

7. Joslin, E. P.: The Treatment of Diabetes Mellitus, Philadelphia, Lea and Felinger, Ed. 3, 1923, p. 611.

8. Gibbon, J. H.: Surgical Technic, in Keen, W. W., Surgery, Philadelphia. W. B. Saunders Co., page 621, vol. 5, 1920.

9. Hauser, E. T., and Foster, N. B.: Surgical Aspects of Diabetes in Nelson, L. L. Surgery, New York, Thomas Nelson & Sons, p. 263, vol. 2, 1927.

DISCUSSION

Dr. W. E. Burnett, St. Augustine:

This subject is so large that it is rather difficult to expand on it in the limited time. After the review of some of the accepted principles by Dr. Jobson, there are one or two little points I would like to call to your attention. The first is the mortality rate in diabetics coming to surgery. In a large series at the Mayo clinic, of 304 major cases there were 18 deaths, an average of about 6%, which is a little larger than in the nondiabetics of the same condition. Out of 366 minor surgical cases there were only two deaths, tonsillectomy and amputation of toe.

The other point is the subject of anesthesia: I think a local anesthetic is deemed ideal unless this prolongs procedure too greatly. In these cases the detrimental factors are greater than those gained by not using ether, which is probably the choice in a large per cent of cases. Gas is better than ether if complete relaxation can be obtained.

Now, in this class of cases we have found that cooperation between the internist and the surgeon is ideal. And in some clinics the policy has been adopted of placing all diabetic surgical cases on the medical service immediately before and immediately after operation. This seems to be the ideal solution when possible.

Thank you.

LOWER BACK PAIN IN MALE INDIVIDUALS*

W. E. Whitlock, M.D.,
High Springs.

Introduction.—Backache is one of the commonest complaints of mankind. Etiologically considered, it is one of the most difficult to deal with. The sufferer often wanders from physician to physician, from urologist to syphilologist, from surgeon to orthopedist, from osteopath to chiropractor. Drugs of all descriptions, patent and legitimate, are taken; applications, operations, manipulations are resorted to without avail. Like a good creditor, the backache stays with the patient sufferer.

*Read before the Tenth Annual Meeting of the Florida Railway Surgeons' Assn., St. Augustine, April 1, 1929.

It is true that a certain percentage of the afflicted are cured or relieved by medical or surgical intervention; in other cases, the backache yields to the chiropractic touch or the magic influence of science of some kind. Is it not true that in the field of industrial medicine no other problem has resulted in more discredit to the profession than the failure in diagnosis and treatment of this condition?

The question of the back is very important, especially in relation to industrial accidents. Structural variations in roentgenograms of normal spines make us very uncertain in our roentgenologic diagnosis. Pictures taken of patients who have no backache frequently show abnormalities that could be ascribed as the cause of much back pain.

The futility of trying to cover the field of etiology and symptomatology of lower back pain with any degree of fullness is obvious; therefore, no attempt will be made to do so.

It will be my purpose in the following discussion to call attention to some of the commoner causes of back pain; principally to mention and briefly discuss some of the causes frequently not considered and which, as a rule, do not enter the mind of the physician when laboring in his attempt to reach a diagnosis and place his finger on the etiological factor in a given case of lower back pain.

Harold R. Conn, in discussing the etiology of this complaint, draws the following conclusio First, trauma is blamed as an etiologic factor in a large percentage of cases of alleged traumatic backs. Second, malingering is of uncommon occurrence. Third, osseous abnormalities of the lower portion of the back furnish a potential group. Fourth, sacroiliac relaxations are of infrequent occurrence. Fifth, sacrolumbar are properly of two classes, *extrinsic* strains, traumatic postural; few sprains; few osseous abnormalities; *intrinsic* arthritis fracture of the articular processes between fifth lumbar vertebra and sacrum, spondylolisthesis strain or sprain of the inter intra-articular or the iliolumbar ligaments.

Five conditions which are quite frequently overlooked because they and their connection with pain in the back are insufficiently known or else the facts making the diagnosis are at times difficult to establish: (1) Of the genitourinary nature (small concrements, chronic prostatitis, etc.). Wesson of San Francisco reports 4 cases of backache that are characteristic of some of the complications that follow non-venereal prostatitis and seminal vesiculitis. In this type of case a routine urine examination will prevent the pitfall. (2) Toxemias (focal infections). (3) Weak foot (flat foot). (4) Malformations (especially of the fifth lumbar vertebra). (5) Myalgia (muscular rheumatism, myositis, neuralgia or myogelsis).

Syphilitic Backache.—Classified as a symptom of syphilitic involvement of the spinal cord, lumbar muscles and vertebrae. In the majority of cases, syphilitic backache, a symptom of syphilitis of the spinal cord, is meningeal in origin and due to irritation of the posterior sensory roots. The symptom backache is a part of the meningeal syndrome. The diagnosis is made chiefly by roentgen ray, evidence of syphilis elsewhere in the body; the Wassermann test, and the therapeutic test.

Spondylolisthesis as an Etiologic Factor.—This condition recognized as a forward subluxation of the fifth, occasionally the fourth lumbar vertebra or the body alone of one of these vertebrae.

All observers have agreed that trauma in some form is the direct cause of spondylolisthesis in most instances. Many cases can be definitely traced to a severe injury, some occupational strain, some to direct trauma and others to the effect of constant heavy labor.

Symptoms of Spondylolisthesis.— (Those of caudal injury not here considered):

(1) Onset either gradual or sudden.

(2) Chief complaint is "backache," usually a dull, aching pain, fairly well localized in the region of the fifth lumbar vertebra. Relieved by abstaining from work for a few days, but recurs with work. Not influenced by small jars or missteps, but hard jolts cause mild exacerbation.

(3) Weakness of back present as a rule.

Myofascitis and Lower Back Pain.—Within the last few years the role of focal infection in the production of the symptom "backache" has been advocated by numerous writers and the part played by such focal infections appears to make itself more and more evident with the more extensive study of such conditions.

Myofascitis is a local manifestation of a toxic condition of the blood, evidenced by low grade inflammation or toxic involvement of the muscles and fasciæ, the symptoms predominating at the

facial insertions of muscle to bone. In 90% of cases of myofascitis the toxic absorption is primarily from the colon; in the remaining 10%, from teeth, tonsils, sinuses, gallbladder, often with secondary toxicity of the colon.

To distinguish between real and supposed traumatic lesions of the lumbar spine is in many instances one of the most difficult problems which confront the orthopedic surgeon. Between the traumatic lesion, of which there are usually definite diagnostic criteria, and the cases of neurosis malingering which, in industrial cases, may be designated as "compensitis," there is a large group of backaches and pains attributed by the patient to some past injury, usually slight, but in which neither clinical nor X-ray examinations reveal any lesion of the spine or sacroiliac joint. It is in this type of case that the patient "shops around" from one orthopedist to another in an effort to discover the true origin of the symptoms. Continued failure to obtain relief may give rise to a certain degree of neurosis, yet the pains are not the fiction of the patient's overwrought imagination, aided by high-strung nerves, but are due to myofascitis.

The local manifestations of subacute or chronic myofascitis are usually orthopedic in nature, and are therefore rarely seen by medical men except in very acute cases. Perhaps this partially accounts for the fact that the "lazy colon" is so often overlooked, for the surgeon may be more prone to accept the patient's statement that he is not constipated, than is the internist. It is found frequently that such assurance may be entirely contradicted by observations of the stool. As has already been indicated, symptoms of traumatic lesions of the lumbosacral spine are often simulated.

Fred H. Albee, New York, a pioneer in this field of investigation, routinely examines the stool of all cases of suspected myofascitis, or in those cases of lower back pain which have failed to respond under usual empiric diagnoses. He finds that in 90% of the cases that the normal gram-negative flora were reduced in number, in several cases, to as low as 30%, whereas the proportion of gram-positive flora was markedly increased. Histamine was variable in amount, but present in all cases where the gram-negative flora was reduced in amount. Histamine in large amount is regarded as a pathologic end-product and shows that intestinal disturbance has gone on to a point at which it may endanger any portion of the body from a toxic standpoint. Hashimoto of the Mayo Clinic has made a valuable study of the production of this chemical in the colon, and its effects on the systemic circulation.

In many of Albee's cases a considerable residue of cellulose or protein formic acid was noted, and the stool proved acid to all indicators. Instead of B. coli predominating as it normally does, and thus checking the growth of pathogenic bacteria, a very small percentage of this organism was present. From the bacteriologic standpoint, Hiss and Zinsser have shown that the function of B. coli in the intestine is not inconsiderate, if only because of its possible antagonism to certain putrefactive bacteria.

The slowing up of peristalsis may be a chronic condition due to sedentary habits, with a tendency to flatulence and distention or it may be that trauma or accident has suddenly imposed inactivity on an active person used to laborious work, and this inactivity has led to intestinal stasis, although the trauma did not directly involve the part to which pain is referred.

It has long been known that absorption from an infected tooth may produce marked symptoms at various joints or fascial insertions, or both. Indeed, symptoms have been known to subside within forty-eight hours after the removal of such teeth.

Yet, in a given case of oral infection, whether teeth, tonsil or sinus, it does not follow that this is the sole location of toxic absorption, for the swallowing of the discharge from the oral infection may infect the lower bowel and this may have become the source of an extremely large percentage of toxic absorption by the time the original focus is removed. It must follow that in such cases the colon requires at least equal attention with the original primary source if the toxic absorption is to be really eradicated. At least stool examinations should be made to determine this.

If the possible areas of absorption in the body are considered, the colon certainly offers one of far greater extent—approximately 500 square inches. The fact that the surface is not smooth but is filled with diverticulæ and haustræ which, by harboring inspissated feces, court infection and toxic absorption, is also significant.

At a recent meeting of the Cleveland Academy of Medicine, when this subject was up for discussion, the general practitioners were practically unanimous that 85% of the joint pains and backaches seen in general practice were due to infectious or toxic absorption from the lower bowels.

Symptoms and Diagnosis of Myofascitis.— The main diagnostic sign of myofascitis is pain at the bony insertions, elicited by tension on the involved muscle or fascia, brought about in examination by limb posture. If it is a case of low back pain, in practically every case flexion of the hip, with extension of the knee, causes tension and resultant acute pain at the insertion of the fasciæ and muscles into bony structures in the region of the sacroiliac joint. In like manner, flexion of the spine with hips and loins in extension produces the same sign. This Dr. Albee calls the "myofascitis sign." The pain may radiate down the limb, and palpation locates it in the fasciæ.

By all means the most frequent location of pain is the lower back, where there are so many fascial insertions into bone. It may be vague or indefinite, and related to the spine, sacrum, or posterior wing of the ilium. Difficulty in completely immobilizing the lumbar spine and preventing pull on the fascial insertions and muscles accounts for the very troublesome and persistent symptoms in this region.

Histories, if carefully taken, frequently reveal other evidence of toxic absorption, such as remote or intermittent headaches, vague attacks of pain, a crick in the neck, previous nervous dyspepsia, evidence of duodenal ulcers, or treatment for lumbago on one or several occasions. These attacks may have been associated with some slight exertion, and the pains have shifted from one region to another, depending on what was the exciting factor.

In the examination of the patient it is essential to bear in mind three points:

(1) That the old idea of the inherent stability and strength of the lower lumbar spine and pelvic girdle must be discarded and it must be regarded as a particularly unstable and complicated mechanism with many and rather weak points.

(2) That the anatomy of the lumbo-sacroiliac apparatus is by virtue of its connection and location especially liable to be secondarily affected by alterations of all structures surrounding and supporting it and supported by it, with the result of mechanical, inflammatory and productive changes.

(3) That many cases are associated with neurasthenia and psychoasthenia, which are liable to exaggerate or misrepresent, local symptoms.

Things We Should Note in the Examination of the Back:

(1) Is the spine rigid locally or throughout? (Allowance must be made for the moderate rigidity of normal old age).

(2) Is there any tenderness over the spinous processes?

(3) Is there any dullness on percussion of the bases of the lungs? (Renal abscess or neoplasm may push up the diaphragm and encroach upon the thoracic space).

(4) Does the patient stand or walk with a list to one side?

(5) Has he any fever?

In the general examination of the patient it must not be overlooked that one must make a thorough search for all sources of focal infection, giving especial attention to the lower bowel and prostate.

Treatment.—Here also I will be unable to go into any detail, but will only be able to touch on the high points. The treatment of lower back pain of course is the treatment of the causative factor and it is the correct determination of this factor which determines our line of treatment.

Martyn stresses the early finding and removal of all foci of infection; for palliative treatment he makes use of the mercury quartz air-cooled ray.

For the treatment of spondylolisthesis the following methods are the most popular: (1) Stabilizing operation-laminectomy; (2) plaster-of-paris jacket; (3) body cast, a Taylor brace, a corset, or a wide sacroiliac belt.

Many of our cases of myositis or lumbago are very advantageously treated by baking and massage, by the use of a support, or by complete rest in bed for the time being.

All cases of backache where syphilitic stigmata are present should receive anti-luetic medication with occasional diagnostic tests until the patient is negative from both a laboratory and clinial standpoint.

Treatment of myofascitis is directed primarily at the removal of the toxic absorption, particularly from the colon, and secondarily to the local manifestations. Such treatment has during the past five years yielded excellent results in a large series of cases which have been singularly resistent to a great variety of treatment elsewhere, directed primarily at the local manifestations.

It has markedly diminished the duration of mechanical treatment for the local orthopedic manifestations, and, in some cases seen early, eliminated mechanical treatment entirely.

If a focus or infection other than the colon has been demonstrated, such as apical abscesses or diseased tonsils, the treatment is apparent and need not be here discussed. But for the remaining 90% of cases in which toxic absorption is from the colon, in the worst and most stubborn cases surgical eradication is certainly not to be advised lightly; and the treatment about to be described renders it in a large percentage of cases unnecessary.

Colonic Treatment.—The colon is treated with medicated lavage, Bacillus coli implantations are made, and a low residue diet is prescribed which prevents carbohydrates from reaching the colon in undigested form, as their presence is known to favor toxic conditions. As Finker and von Wassermann believe that autointoxication is the result of bacterial activity on certain sugars, eliminating the offending sugar from the diet may be beneficial. Laboratory examination of the stool will reveal which sugar is the most active bacteriologically for a given patient, and this sugar should be eliminated from the diet.

To forestall any possibility of residue protein reaching the colon undigested, or bringing with it partially digested carbohydrates and liberating them in the colon, proteins and meats are taken only in moderate quantities. The importance of thorough mastication is impressed on the patient. The work of Kellogg at Battle Creek Sanitarium has taught us much regarding the relation of diet and the action of the colon, and the influence of the colon on health.

To help restore the alkaline balance of the colonic tract, 15 grs. each of magnesium oxide and calcium lactate are given in water after eating, three times daily. Magnesia magma powders are also given if necessary to relieve constipation.

Colonic lavage is given daily for about ten days. The patient is then ready for colon bacillus implantations. Some patients will do well without them, and the implantations are therefore not given as a routine; but it has been found that in most cases their action contributes definitely to the relief of symptoms. The cultures should be obtained fresh from the laboratory and used within four hours.

The implantations are given as follows: with a No. 16 or 18 catheter, pushed in very gently as far as it will go, 120 cc. of the culture combined with an equal amount of dextrin (heated by placing the bottle in hot water) are instilled through a small glass funnel attached to the catheter. Care should be taken that the buttocks are well elevated. Following this treatment, which is given daily for ten days, the patient is allowed to rest for fifteen or twenty minutes.

This treatment has a sound physiologic basis, because it restores the normal intestinal flora (B. coli) whereas oral administration of B. acidophilus is purely symptomatic and unphysiological.

In intractable cases in which joint symptoms persist even after implantation of colon bacilli, the patients are sent to the laboratory for the complement fixation test as to intestinal or focal infection, and vaccines are made accordingly. There are unusual cases in which the myofascitis is coincident with infectious arthritis.

Local Mechanical Treatment.—This treatment, in the form of adhesive strappings, belts, corsets and braces, is applied when indicated, but the treatment just outlined alleviates local symptoms to such an extent that the need for local treatment is surprisingly eliminated or diminished and is entirely secondary.

In most acute cases, in addition to the measures outlined, rest and recumbency in bed with the application of local heat are efficacious. This of course should be associated with stimulation of eliminative processes, and the giving of such drugs as neocinchophen and acetylsalicylic acid. When the case becomes subacute enough to be ambulatory, strapping of the back in precisely the same way as most clinicians would strap for sacroiliac strain, namely, with a pad over the sacrum and tightly drawn adhesive straps placed three fourths of the way round pelvis, is beneficial as a palliative measure until the toxicity is cleared up. This strapping relieves the pull on the myofascial insertions until the toxic inflammation is overcome by the colonic treatment and removal of other foci, as already outlined. When the toxic element has been brought under control, however, such strappings become necessary. The length of time required for these strappings, if at all, varies within wide limits in the individual case.

Diet.—As has already been indicated, careful attention is given to the diet, eliminating whatever sugar is found by examination of the feces to be particularly active bacteriologically for the patient, and restricting proteins and meats to moderate quantities, with attention to thorough mastication.

Massage.—During the acute stage, massage should not be carried out as it may do more harm than good. In the chronic stage, however, massage is of the greatest service in that it undoubtedly overcomes myofascial adhesions, stimulates local circulation, and is beneficial from every standpoint.

In a few cases in which the muscles and fasciæ have become shortened, stretching under anesthesia has been found to be very helpful. This consists of putting the patient in the dorsal position and flexing the hip with the knee extended. This treatment should be followed by massage with stretching.

Fluids.—Every means of stimulating elimination should also be employed. Hence fluids should be taken in large quantities, and alkali water is very valuable. Daily hot baths with skin friction may be helpful.

Medication.—In acute persistent cases, neocinchophen in doses of 40 grs. a day should be given for periods of four or five days with an intermission of an equal number of days. It has been found to be very beneficial in supplementing the eradication of focal absorption.

Results.—Striking has been the relief of symptoms when the colonic function has been returned to normal, in cases that have been resistant to mechanical treatment. Patients who have adhered to this regimen have been entirely relieved of symptoms that were in many instances chronic, and have discarded immobilization apparatus in cases in which this had previously been worn. The only recurrence has been in cases in which the colonic function was again allowed to become deranged, and these have usually again responded promptly to treatment.

It has been found most advantageous to have the entire treatment carried out under the direction of the orthopedic surgeon, as the colonic condition and the orthopedic manifestations are closely interrelated, and as the symptoms are orthopedic in nature.

Dr. Albee states that he has found many cases of so-called sacroiliac strain to be in reality myofascitis and that he now believes that the former entity rarely exists.

Conclusions.

(1) The essentials for an etiologic diagnosis in cases of backache are system and thoroughness in examination.

(2) The search for remote causes and for those of focal character is of equal if not greater importance.

(3) Congenital anomalies of the lumbo-sacral region predispose to injury, with subsequent backache.

(4) Lumbago proper or lumbo-sacroiliac myalgia is often one of the most frequent and least recognized conditions.

(5) The majority of the acute and many of the chronic backaches occur in young adults below the age of 45 years and except for the case of pure myofascitis, are usually the result of sprain of the lumbo-sacral ligaments; although Dr. Albee does not agree with this statement, I believe it to be true and have found it true in many of my cases.

(6) The strain generally occurs more frequently in males engaged in laborious work, athletics and others in awkward posture, namely, flexion, semiflexion and twisting of the torso, especially on impending muscular effort, as lifting and pushing.

(7) The lumbo-sacral joint is normally a most unstable joint and in studying its anatomy insufficient emphasis has been placed on the ligamentous "guy rope" and the relation of the bony structures to one another, whereas undeserved importance has been given to the bony abnormalities.

(8) Stereo-roentgenograms in the antero-posterior position and lateral positions are essential in diagnosis of any case of obscure lower back pain.

(9) A knowledge of the bony abnormalities of the lumbo-sacral region and an accurate knowledge of the normal anatomy of the spine is essential in the correct interpretations of the roentgenograms of the area of the spinal column in question.

(10) A routine roentgenologic examination of the lumbar spine of every industrial employee in whose work there is liability of back injury would do much in the prevention of many of our injuries of the lower spine by having a knowledge beforehand of any abnormality which may exist and will also do much to decrease our compensation cases and aid in the prevention of unnecessary entanglements in cases of alleged "back injuries" when the pathology presented may be only developmental abnormality, which, if we had a record of beforehand, would greatly prevent such legal complications.

(11) In every difficult case, the establishment of a diagnosis depends on close cooperation in the various diagnostic branches of medicine.

THE USE OF INSULIN IN FATTENING LEAN INDIVIDUALS—REPORT OF THIRTEEN CASES*

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Any factor in the treatment of lean, asthenic individuals which will improve their nutrition should have wide popularity, for failures with forced alimentation and rest are frequent even in experienced hands.

About two years ago Falta,[1] and later Bauer and Nyiri,[2] made the observation that insulin has a weight-increasing influence upon the undernourished individual with an intact carbohydrate metabolism. Then Charvat[3] reported good results in a few cases, followed by Moutier,[4] who saw a definite gain in weight in nine out of twenty-three abnormally thin patients treated with insulin. Vogt[5] emphasized the use of insulin carbohydrate treatment in cases of status asthenicus and visceroptosis. More recently Frank[6] has recommended insulin with abundant carbohydrates in many types of pathological emaciation, whether due to constitutional thinness, deficient diet or sickness, including thyrotoxicosis.

During the past three months I have watched thirteen chronic underweight non-diabetic individuals attempt to improve their nutrition with insulin and a heavy carbohydrate diet. They were selected ambulatory office patients, running from ten to thirty pounds underweight, with symptoms of chronic exhaustion indicated by weakness, fatigue, anorexia, headaches, more or less irritability, and some gastro-intestinal complaints. Objectively, they had some of the signs of habitus asthenicus, being typically of slender build, with long trunks and flat chests and abdomens. In five cases gastroptosis or enteroptosis was proven by X-ray, while nephroptosis was noted in four patients. The common foci of hidden infection were in most of these patients fairly well eliminated as a possible cause of their weariness. They all had negative Wasserman reactions in the blood, and some grade of secondary anemia was proven in each case. Active pulmonary tuberculosis was ruled out in each case, for though this same treatment has been advocated as an adjunct in non-febrile cases of tuberculosis, it did not seem advisable to include any in this group. Most of them had had some degree of rest and forced high caloric feedings without much improvement before starting on this treatment. There were four men and nine women, and the ages varied from twenty-five to forty-five.

The patient or a member of his household was instructed how to give the insulin and the necessity of including an abundance of carbohydrates in the diet was well emphasized. The procedure was to begin with five units twice daily before meals and increase gradually, in some cases up to forty daily units, though the average was about twenty-five units daily, in divided doses.

RESULTS OF TREATMENT

Three cases were unable to gain satisfactorily, and a fourth had to abandon the treatment because her increased appetite upset her stomach, on which a gastro-enterostomy had been performed several years previously.

Nine patients made rather rapid gain in weight, from five to sixteen pounds over a two to six-week period. The average gain was about nine pounds and the average duration of treatment was three weeks. Coincident with the gain was a definite objective improvement, marked chiefly by an increase in the tissue turgor of the face and body. The subjective improvement was marked in most cases, with much less fatigue, increased strength, marked improvement in appetite amounting at times to an astonishing degree, decreased gastro-intestinal symptoms, and fewer headaches. Attention should be called to one case, a man of 45, who had been underweight 20 pounds for one year and had recently recovered from food poisoning. He received twenty to forty units of insulin daily, and put on sixteen pounds in nineteen days, which was the most rapid gain of all. Part of his gain might be attributed to the non-specific roborant action of the post-infectious state which is sometimes so evident.

Two typical case records are cited as follows:

Case 1—Mrs. J. S., aged 25, housewife. She stated her health was fine before her marriage five years previously, with weight of 138 pounds. She suffered a miscarriage three years ago, followed by an appendectomy and oophorectomy. Since then she has had wretched health, with fatigue, headaches, anorexia and inability to gain

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back her strength and weight, which was 110 pounds. The diagnosis was visceroptosis, migraine, malnutrition and secondary anemia. She feared she had tuberculosis, though X-rays were normal, and went to a sanitarium for five months, where she gained to 128 pounds and felt much improved. After taking up her household duties again she dropped back to 120 pounds and was again feeling as she did before she gained. On August tenth insulin was started, the dose being 20 units daily the first week, and 25 units the next three weeks. She gained 13 pounds. Insulin was then stopped, as she was feeling so good, and a month later she had gained three more pounds and was free from symptoms.

Case 2—Mrs. E. P. D., aged 35, housewife. For ten years subsequent to poor obstetrical attention she had deplorable health, and complained of abdominal pains, anorexia, great fatigue, weakness and headaches. Her best weight was 140 fifteen years previously, and her weight at first exaination was 108 pounds. The diagnosis of ureteral stricture with pyelitis was established by Drs. Holmes and Coplan. In addition, fluoroscopic examination of her gastro-intestinal tract showed a marked gastroptosis and enteroptosis. She had a marked secondary anemia. I attended her several months attempting to put on weight with usual measures. At the same time the urologists were trying to relieve her of her ureteral stricture, but owing to her unusually severe reactions following her dilatations we decided to try her on insulin and temporarily abandoned the urological maneuvers. She weighed 112 pounds when insulin was started, and gained five pounds the first two weeks, and another five pounds after four more weeks, reaching 122 pounds, which was her best weight in ten years' time. She felt fine, was able to do her work, and had a zest for food. She was changed from a despondent to an aggressive state by her gain in weight. Insulin was stopped then for a month, during which time she maintained the gain she had made, and though she is now suffering from her ureteral colic and is once more in the hands of my confreres, I feel sure she has a much better chance of getting along, with her improved nutrition state.

None of the thirteen cases suffered any ill effects from taking insulin. Some of them experienced mild hypoglycemic reactions at times, but these were readily controlled by the usual measures of eating candy or drinking orange juice. Three cases stated they did not sleep soundly when taking insulin, but as this is probably a manifestation of hypoglycemia this tendency may be obviated by a sweet drink at bedtime. I do not believe there is the danger of a severe hypoglycemic reaction in the non-diabetic, as sometimes happens in the diabetic patient, without the warning prodromes, for the non-diabetic has a normal sugar metabolism and also the glucose and insulin are not balanced so closely in the diet, so there is a wide margin of safety.

Because of the occasional anaphylactic reaction reported from insulin, it is not advisable to try to fatten an individual with this substance if he has asthma or hay fever. In this connection, mention should be made of one patient not included in this group, in whom insulin was tried but soon stopped, owing to a marked tremor on taking even five units with meals. She had some symptoms of chronic tetany, with a blood calcium below normal, and as her fasting blood sugar was within normal range, it seems logical to presume that her tremor and nervousness may have been due to the influence of the insulin on the parathyroid mechanism rather than on the sugar metabolism.

MECHANISM OF THE ACTION OF INSULIN

The explanation of the weight increase in these non-diabetic patients is not clear. The mechanism of the action of insulin in the carbohydrate metabolism is far from being an open book, in spite of the great amount of investigation being carried on.[7] The fact seems well substantiated that insulin causes increased oxidation of the sugar, with the formation of glycogen, which accounts for the disappearance of glucose from the blood following the injection of insulin.

Janny and Shapiro[8] state that since insulin and carbohydrate spares more protein in the metabolism than does carbohydrate alone, the indication is that insulin aids in protein synthesis, and thus a logical basis for the use of insulin plus carbohydrate is afforded in the treatment of non-diabetic conditions.

The increase in weight is thought by some authors to be due to an influence on the water economy of the body, for the cells are infiltrated by water after insulin is taken.[9] It has been noted repeatedly that insulin produces edema in some diabetics, accounting for a false increase in weight. Rabinowitch[10] recently discussed this problem, and stated his cases had normal kidney function, but when insulin was withdrawn he

noted a polyuria without glycosuria, with a decrease in the false weight of the patients.

This theory of increased water in the tissue colloids will not hold good in the non-diabetic of this type, however, for in this group of cases there was no loss of weight after the insulin was withdrawn, and several patients even continued to gain. The urine output was measured in Case 11, the man who gained sixteen pounds, and he had no polyuria when insulin was discontinued, and lost no weight.

The improvement in the gastro-intestinal symptoms is due in the visceroptotic cases probably to improved position of the viscera, and also to increased motility of the stomach, for it has been shown by Simici[11] and others that insulin definitely increases the motility of the stomach.

The existence of a state of chronic hypoglycemia has been mentioned in the past few years, recently by Harris[12] and Hoxie.[13] The latter suggests a general depression of the metabolism as a cause of the hypoglycemia, with exhaustion as the underlying cause. He noted marked improvement in the nervous and mental state of such cases, correlative with improved nutrition. Some of his cases are symptomatically similar to the group under discussion. Unfortunately, blood sugar determinations were made in only two cases, and they were normal. Basal metabolic rates were determined in three cases, and readings below normal were found. It seems likely that insulin may be of advantage in treating patients with chronic hypoglycemia, because of its roborant action, in spite of the apparent paradox in the suggestion. A more complete metabolic study is needed in this type of case, however, before deciding on the place of insulin in treatment.

SUMMARY

1. Insulin injections, together with high carbohydrate feeding were used in thirteen cases of chronic underweight individuals, with or without associated visceroptosis, suffering from chronic exhaustion.

2. Nine cases made a satisfactory gain in weight, with a definite improvement in subjective symptoms.

3. No loss of weight was observed during the month following the withdrawal of the insulin treatment.

4. Insulin plus carbohydrate in abundance merit a recognized place in the treatment of patients with habitus asthenicus.

BIBLIOGRAPHY.

1. Falta, citation by Vogt, Forced Alimentation with Insulin. Munchener Med. Wochenschrift, Jan., 1926.
2. Bauer and Nyiri: Medizinische Klinik, Berlin, 21: 1454.
3. Charvat: Casopis lekaru ceskych. Prague, May, 1925.
4. Moutier: Archives des Maldies de l'app. digestif, 16:422.
5. Vogt: (See above).
6. Frank, E.: Deutsche medizinische Wochenschrift, 53:219.
7. Editorial, J. A. M. A., Vol. 88, No. 3, p. 173.
8. Janney and Shapiro: Arch. Int. Med. July, 1926, Vol. 38, pp. 96-101.
9. Vogt: (See above).
10. Rabinowitch, I. M.: Canadian Med. Assn. Jr., June, 1927, p. 685.
11. Simici, et al.: Arch. des maldies de l'app. digestif, January, 1927.
12. Seale Harris: J. A. M. A., 83:729.
13. Hoxie and Lisherness: Am. Jr. Med. Sc., Vol. 173, No. 2, p. 220.

GANGRENOUS VULVITIS OR NOMA PUDENDI

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"Noma[1] is comparatively a rare disease, characterized by rapidly spreading gangrene, originating in the mucous membrane near a mucocutaneous orifice. The process has been known to originate in the nose, anus, vulva, prepuce, and mouth. When originating in the mouth it is called 'stomatitis gangrenosa, or cancrum oris.'

"Etiology: The preponderance of modern opinion believes that the cause of noma is the same as that of ulcerative stomatitis, and Vincent's angina; namely, the bacillus fusiformis with its associated spirillum (or spirocheta). The lesions always show a mixed infection, but the etiologic importance of the bacillus fusiformis and the associated spirillum is supported by numerous facts. The great majority of observers have regularly found these organisms in the lesions of noma. The gangrenous character of the lesion of noma bears a close histological resemblance to that of both Vincent's angina and ulcerative stomatitis, and the earliest lesions of noma are indistinguishable from those of Vincent's angina. While other organisms are found in the gangrenous tissues of noma, many observers have reported that only the bacillus fusiformis and spirillum were found in the deeper tissues near the line of demarcation. Noma is particularly a disease of early life, and is most frequent in children under five."

Holt,[2] in his book on "Infancy and Childhood," writes interestingly on Gangrenous Vulvitis (noma). "This is the same process as that seen

in the mouth and known as cancrum oris. It usually follows one of the infectious diseases, most frequently measles, occurring in patients whose general vitality has been greatly reduced.

"The condition may succeed a simple catarrh or a herpetic vaginitis. There is first noticed a tense, brawny induration, the skin being shiny and swollen over a circumscribed area. In the centre of this there soon appears, usually upon one of the labia majora, a dark circumscribed spot. Day by day the gangrenous area advances, preceded by the induration. It may involve the whole labium, extending even to the mons veneris and the perineum."

"These cases are generally fatal. If recovery takes place it is with considerable deformity of the parts in consequence of the extensive sloughing and cicatrization. As sequellæ there may be fistulæ, stenosis, or atresia of the vagina. The prognosis is very bad.

"The only radical treatment is early excision of the gangrenous part, and the application of the actual cautery or nitric acid."

Griffith,[3] in his book on diseases of infants and children, has this to say about this rare disease:

"Gangrenous Vulvitis (noma pudendi)—By this title is designated a gangrenous condition analogous to the noma seen in the mouth. It occurs in cases of malnutrition, especially after some of the infectious diseases, chiefly measles, or erysipelas, or may follow apthous inflammation of the labia. In a case reported by Rach, numerous spirochetes and fusiform bacilli were found. A swollen, tense, indurated, shining, dark-red area appears upon one of the external labia. This soon becomes dark blue and then black in color, breaks down, and discharges an offensive gangrenous material. In severe cases the disease spreads with great rapidity, involving more or less of the whole vulva and extending to the vagina, perineum, mons veneris, or other neighboring parts. The constitutional symptoms are those of extreme prostration, with pain and fever, and death nearly always results. In the milder cases the gangrenous process is limited to a small area, the slough is cast off, and an ulcer remains which heals with more or less cicatricial deformity.

"Treatment must be instituted early to be of any avail, and consists in prompt, thorough incision, followed by cauterization."

I had the good fortune to have a case that presented all the sequellæ referred to by the authors quoted above.

A negro child, female, age 2 years, was brought to my office in the following condition: high fever, delirious, feeble pulse, very septic, moaning, and tossing her head from side to side, calling for water all the time. She was greatly prostrated and death seemed imminent.

Her mother said she had been ailing only a few days. No history of previous illness, nor of any vaginal discharge. The vagina was a putrid gangrenous mass, with an offensive discharge. The gangrene involved the entire genital tract from the perineum to the mons veneris. This patient was brought from 18 miles in the country. I advised hospitalization, but her mother decided to take her back home.

I gave them a bottle each of Dakkin's solution for local use, and a heart tonic, and bade her good-bye, not expecting to see her alive again. Two days later they brought her back, presenting the following condition: the gangrenous mass had sloughed off, leaving a clean granulating, healthy-looking surface, very little fever, mind clear, heart action good. It had invaded the perineum down to the spincter ani muscle, labia, clitoris, and entire vaginal tract, including the fornix. In the vaginal vault was a tiny hole which I took to be the entrance to the uterus. I could not locate the urethral meatus, however; she had no difficulty in voiding or defecating. When the mass was cast off it left a large granulating hole that could almost admit a hand. The sequellæ will have to be attacked and remedied as best we can, as they arise. The most important will be providing for voiding the urine. Later on, should she live, it will be necessary to remove the uterus, as the vaginal tract will be closed by granulating and scar tissue.

This little patient is being kindly cared for by the Hospital of the F. A. & M. College located at Tallahassee.

BIBLIOGRAPHY.

1. Dunn, Charles Hunter: Pediatrics, Vol. III, pp. 99-100, 1917.

2. Holt, L. Emmet: Infancy and Childhood, p. 644, 1897.

3. Griffith, J. P. Crozer: The Diseases of Infants and Children, Vol. II, p. 228, 1920.

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MEETING OF SOUTHERN MEDICAL ASSOCIATION

Tentative arrangements for the Twenty-third Annual Meeting of the Southern Medical Association, which is to be held in Miami November 19th to 22nd, have been drawn up by a Committee of the Dade County Medical Society which is to be the host to the convention.

The convention will last four days and there will be numerous clinics by Miami physicians on November 19th and clinics by visiting physicians on November 20th. November 21st and 22nd the sectional programs will be presented. The American Society of Tropical Medicine and the Southern Association of Anesthetists will meet jointly with the Southern Medical Association.

Members of the Florida Medical Association are manifesting unusual interest in this meeting and it is hoped that our membership will attend

in large numbers. The Dade County Medical Society is undertaking its greatest medical meeting and the responsibility is not only theirs but of the entire membership of the State Association.

ANNUAL REGISTRATION

A total of 1,430 Doctors of Medicine registered with the State Board of Health and thus placed their names in a public, centralized record, which is now available, as provided for by the Legislature of 1927, through a bill endorsed by the Florida Medical Association, the State Board of Medical Examiners and the State Board of Health. Several editorials and comments have been published in the pages of this Journal relative to the early history of the registration law. One of the first editorials will be found in the September, 1927, Journal of this Association. It might be worth your while to look up this Journal and read the editorial again.

Positive conclusions as to the merits of the new law cannot be attained the first year. It is interesting, however, to note some of the information gleaned through the first year's operation of the new law.

It was discovered that quite a number of original licenses had been lost, stolen, burned, or not received and that the doctors had failed to have them recorded with the clerk of the circuit court. Thus, the individual doctor had no positive record of his license to practice medicine within the state. The new law was the means of bringing these matters to the attention of the practitioners affected. Duplicate licenses were established through surviving members of the old Boards, later licenses were established through the records of the present Board of Medical Examiners; a few individual licenses were established by court procedure; and finally, one was established during the last session of the Legislature. The placing on record of these missing or lost licenses may prove to be a very important matter at some future time to those affected. For example, a doctor who is called as an expert witness in a court case may be very much embarrassed if some shrewd attorney could bring out the fact that there was no record available of the doctor's license.

Many irregularities have been discovered as the first year's activities in registration progressed. One individual claimed to be engaged in the treatment of cancer. When officially applying for his Certificate of Registration it was discovered that he had never been licensed to practice medicine in Florida. Another man claimed to be a specialist in treating diseases "by gift." He cannot understand why he is not permitted to register. Many interesting cases were revealed through the correspondence that would require too much space to mention here.

Under date of March 1st of this year, a complete roster of doctors practicing medicine was published by the State Board of Health through the Bureau of Vital Statistics. This publication was mailed to every doctor in the state and gives authentic information as to the names and whereabouts of those authorized to practice under the laws of this state. Many doctors will find this publication a convenient, ready reference in looking up individuals as the names have been arranged in alphabetical order and also in order by towns. It will also be a convenient means of checking a new doctor who may take up practice in your town. If his name does not appear as having registered as required by law, there may be a reason.

The publication just referred to we believe is the first of its kind in the state. It also contains the full text of the law, opinions from the Attorney General on interpretations and a few interesting tables giving the number of doctors practicing in each county, their nativity, length of residence in Florida, as well as ages and race.

STATE NEWS ITEMS

The semi-annual meeting of the Florida East Coast Medical Association was held in Daytona Beach June 14th and 15th. The meeting was well attended and the papers were better by far than in the average medical program. The social functions were a distinct feature of the convention and all who attended came back with glowing accounts of the wonderful hospitality shown them. The following scientific program was presented:

"Gastro-Intestinal Reflexes and their Clinical Application" (with motion pictures), P. B. Welch, M.D., Coral Gables.

"Infection of the Hand" (motion pictures), H. D. Van Schaick, M.D., Jacksonville.

"Blood Circulation" and "Fertilization of the Oyster" (motion pictures), Charles F. Herm, Director Pathological Laboratory, Halifax District Hospital, Daytona Beach.

"Pulmonary Suppuration," Julian E. Gammon, M.D., Jacksonville.

"Cardiac Risk in Surgery," Herrman Hirsch Harris, M.D., Jacksonville.

"Vaccine and Serum Therapy in Pediatrics," Wm. W. McKibben, M.D., Miami.

"Surgery of the Gall Bladder and Ducts," J. Knox Simpson, M.D., Jacksonville.

"Case Reports on Spontaneous Gastric Rupture," R. O. Lyell, M.D., Miami.

"Value of External Version in Obstetrics," Chas. J. Collins, M.D., Orlando.

"Sarcoma of the Prostatic Area in an Infant of Four Months," Roy J. Holmes, M.D., and Milton M. Coplan, M.D., Miami.

"Jaundice," Stewart R. Roberts, M.D., Atlanta, Ga.

"Nervous Complications of Measles," Paul K. Jenkins, M.D., Miami Beach.

"Chronic Nephrosis," Spencer A. Folsom, M.D., Orlando.

"Defective Development of the Vagina" (lantern slides), Harold D. Van Schaick, M.D., Jacksonville.

"Chocolate Cysts of the Ovary," Davis Forster, M.D., New Smyrna.

"Surgical Notes on Urinary Tract in Infancy and Childhood," Robert B. McIver, M.D., Jacksonville.

"Gonorrhœa in Women," John E. Hall, M.D., Miami.

Dr. Stewart Roberts of Atlanta was the guest of honor and delivered a splendid address.

The election of officers resulted as follows:

President, Roy J. Holmes, Miami; vice-president, J. Ralston Wells, Daytona Beach; Secretary, I. M. Hay, Melbourne.

The next meeting of the Association is to be held in Melbourne either in the spring of 1930 or the early summer, the date to be set later. Due to the meeting of the Southern Medical Association in November, the regular fall semi-annual meeting of the Florida East Coast Medical Association is not to be held this year.

* * *

Dr. G. H. Edwards of Orlando is spending some time visiting the clinics of Chicago and Cleveland.

* * *

Dr. Thomas B. Echard of St. Petersburg is spending the summer in Connellsville, Pa.

* * *

Dr. and Mrs. Robert D. Ferguson of Ocala announce the birth of a daughter, July 2. The little lady has been named Deborah Lockwood.

* * *

Dr. W. P. Adamson of Tampa attended the Eightieth Annual Session of the American Medical Association at Portland, Oregon, as a delegate from the Florida Medical Association.

* * *

Dr. H. Foxworth Horne announces the removal of his office from the St. James Building to 325 W. Duval St., Jacksonville.

* * *

Dr. L. H. Bartee of Lynn Haven and Miss Ada Montana of Panama City were recently married.

* * *

Dr. Rufus Thames of Milton recently visited Atlanta where he attended clinics.

* * *

Dr. Chas. B. Mabry of Jacksonville, who has been spending the past two months abroad, recently returned home.

* * *

Dr. T. D. Vasser of Lakeland was recently elected president of the Florida State Board of Medical Examiners. Dr. S. E. Driskell of Jacksonville was elected vice-president and Dr. W. M. Rowlett of Tampa was re-elected as secretary-treasurer. The other members on the Board are: Drs. N. A. Baltzell, Marianna; T. W. Hutson, Miami; James E. Crump, Winter Haven; John M. Mann, Lake Butler, and Eugene G. Peek of Ocala. The Board recently held an examination at the Seminole Hotel in Jacksonville. Thirty-eight applicants appeared before them.

* * *

The Seminole County Medical Society recently adopted resolutions to discontinue the custom of giving free medical examinations to school children and teachers. The following constitute the resolutions:

"*Resolved* by the Seminole County Medical Association that the services of its members be not offered gratis to city and county for the examination of school children and teachers, and submit the following reasons:

"First—Any source to have any high origin of efficiency must have a reward and must carry a responsibility.

"Second—The doctor's time is wasted going through a formality, for if a child's health is criticised it is rightly and properly referred to the physician of their choice for treatment—and

this reference should be made by a competent county nurse.

"Third—In reference to the examination of school teachers: We feel that the health of the school teacher is a matter of public safety and the expense should be borne by the public and not by the school teacher or the doctor. Believing this to be true, we have been loath to make a charge for examination—consequently the examination has been formal and of little or no value for public safety. We would recommend that you employ some one physician to examine school teachers where it would fix a responsibility as to the health of teachers and clothe him with the authority to accept or reject them.

"We offer our services as a society to perform any charity service to individuals who are unable to pay, but do not feel that the health of the public school is our individual responsibility, and with this feeling we realize the service we would give would be only perfunctory and formal."

* * *

Dr. J. A. Ward of Birmingham, Ala., was recently a visitor in Panama City.

* * *

Graduating exercises of the Nurses' Training School of the Riverside Hospital, Jacksonville, were recently held. The young ladies receiving diplomas were: Dorothy Collar, Dorothy Coburn, Clarissa Fullerton, Elizabeth Krash, Emily Howell, Anna Jeannette Brown and Virginia Hudgins.

* * *

Dr. C. L. Jennings of Jacksonville announces the removal of his offices from the Professional Building to the Wade Building, 1022 Park St.

* * *

A Presidential warrant, signed by Herbert Hoover, for the return of Dr. A. H. Weathers of Jacksonville, to the federal penitentiary at Atlanta, to serve the remaining forty-two months of his six-year sentence for violation of the Harrison narcotic act, was recently issued. Weathers was granted a conditional commutation of sentence by President Coolidge after having served thirty months in the penitentiary. While at liberty he was arrested for a violation of the narcotic law and the alleged violation of his parole resulted in the signing of the presidential warrant.

* * *

Drs. F. W. Foxworthy, H. Frank Davis and Rothwell Lefholz announce the removal of their offices to 911 Huntington Building, Miami.

ORLANDO S. CLYATT

Dr. Orlando S. Clyatt ended his own life at his home in Lakeland on June 4th. He had become despondent as a result of illness. He is survived by his wife; three sons, Marion, Pete, Orlando S., Jr.; and two daughters, Mrs. W. O. Hunt and Mrs. John J. Treadwell.

* * *

Dr. W. H. Watters of Miami and Boston was recently elected president of the Massachusetts Medico-Legal Society. He has also recently been reappointed as a Professor of Preventive Medicine in the Boston University School of Medicine.

* * *

The Suwannee River Medical Society, comprising the counties of Columbia, Hamilton, Madison and Suwannee, met Friday evening, June 14th, at Madison. The members in this district are enthusiastic as was indicated by the fact that eighteen doctors were present to participate in the fine repast served at the Sis Hopkins' Inn. Every county was represented and in addition, two members of the Taylor County Medical Society were in attendance. Dr. Gerry R. Holden of Jacksonville gave a talk on "The Use of Radium in Gynecology" which was very interesting and instructive.

* * *

Dr. Dallas Adams has recently moved from Eau Gallie to Titusville.

* * *

The Pasco-Hernando-Citrus County Medical Society recently met with Dr. Geo. A. Dame at Inverness. Dinner was served at the Orange hotel, after which the scientific meeting was held in the parlor of the hotel. Dr. H. C. Dozier, president of the Florida Medical Association, was honor guest of the evening and spoke on "Classification of Work and Publicity." The following scientific program was presented: "Diathermy and Electric Treatment," E. F. Carter, M.D., Tampa; "A Case of Fracture of Both Legs with Tetanus and Gangrene Infection," H. C. Dozier, Ocala. Those present were: Drs. J. T. Bradshaw, Lake Jovita; T. F. Jackson, Dade City; T. J. Hudson, Crystal River; Geo. A. Dame and K. Cross, Inverness; and Dr. Geo. R. Creekmore of Brooksville. The following guests were present: Drs. H. C. Dozier, and J. N. Moore, Ocala; E. F. Carter and H. O. Snow of Tampa and Dr. A. O'Bannon of Homosassa.

Dr. Don S. Fraser and Dr. J. M. Whitfield of Panama City are now associated in practice.

* * *

Dr. A. L. Rowe announces the change of his address from Lake Worth to the Grady Hospital, Atlanta.

* * *

Dr. W. Cooper Myers of Tampa announces the removal of his offices from 2023½ Seventh Avenue to Room 302, Schulte-United Building, 305 Cass St.

* * *

DAVID GRANVILLE HUMPHREYS, JR.

Dr. David Granville Humphreys, Jr., of Jacksonville, died June 25th of angranulocytic angina. Dr. Humphreys was born in Fernandina, October 25, 1899. He graduated from Washington and Lee University in 1922 and from Johns Hopkins University, Medical Department, in 1926. He was a Junior member of the American College of Surgeons, associate surgeon of the Riverside Hospital Staff, and visiting pathologist at the Duval County Hospital.

* * *

The following resolutions were recently adopted by the Hillsboro County Medical Society:

Whereas, Almighty God in his divine wisdom has seen fit to take from our midst our beloved friend and confrere, Dr. Charles William Bartlett.

Whereas, the medical profession in general and the Florida Medical Association, and the Hillsborough County Medical Society in particular, has lost in his death one of its most enthusiastic members.

Whereas, the community at large and especially the health department of the City of Tampa has lost a most faithful friend and constructive agent for the good of the health of the community.

Whereas, Dr. Bartlett's family has lost a devoted and loving husband and father.

Be it resolved, that the Hillsborough County Medical Society express its grief and condolence to all those who have felt the loss of his presence, loving kindness, service and devotion.

Be it resolved furthermore, that a copy of these resolutions be spread upon the minutes of the Hillsborough County Medical Society, a copy sent to the grieved family, the public press and the Florida Medical Association Journal.

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JOHN S. HELMS, M.D.,
N. L. SPENGLER, M.D.

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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

J. Burns Amberson, Jr., who contributes this number, is Physician-in-Chief of Loomis Sanatorium, established in 1896 by Dr. Alfred Lee Loomis and his friends. Dr. Loomis was Trudeau's physician, and it was he who advised him to go to the Adirondacks. Dr. Amberson's method of describing physical signs in pulmonary tuberculosis is unique. Instead of listing the many and sundry signs that may make their appearance during the course of the disease, he pictures for his readers the pathologic mechanisms which account for the discoverable phenomena; he traces the development of the pathology from its early beginnings through its successive stages and shows how these changes affect the physical findings.



Loomis Sanatorium, original farm house before remodeling.

PHYSICAL SIGNS IN PULMONARY TUBERCULOSIS

Skill in interpreting physical signs of tuberculosis lesions in the lungs depends on an understanding of the underlying pathological mechanism. Examiners encounter many variations in different cases. Some of these are not easily explainable, but most of them should convey definite information if one is accustomed to construct in his mind a picture of pathological anatomy as he moves his stethoscope over the chest. The variations are best explained by tracing a lesion through the stages of its development and advancement to necrosis on one hand, and through its gradual healing on the other.

THE EARLY STAGE

Most patients falling sick with pulmonary tuberculosis and presenting definite physical signs of its presence have a lesion occupying an area at least one or two centimeters in diameter. It is common knowledge that many have widely

(*Continued on page* 40)

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	94%
Bay	J. M. Whitfield, M.D., Panama City.					55%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		71%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	55%
Columbia	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	67%
DeSoto-Hardee-Highlands	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	93%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	86%
Escambia	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	71%
Hamilton	R. A. Barnett, M.D., White Springs.					100%
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	72%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	53%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	93%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	82%
Leon-Gadsden-Liberty-Wakulla-Jefferson	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	71%
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	79%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	95%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	81%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	90%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	96%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	70%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	75%
St. Johns	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	64%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	84%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		83%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	60%
Suwannee	W. C. White, M.D., Live Oak.					86%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	90%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-Holmes	W. C. Harper, M.D., Chipley.					100%

NOTE—Secretaries: Please submit information to complete the above schedule.

extensive lesions before they are aware of the presence of the disease, but for purposes of illustration the small lesion will be considered.

In its first stages, this lesion presents the appearance of an intact tuberculous nodule or of a small patch of tuberculous pneumonia. If it is situated deep within the lung or at some poorly accessible point beneath heavy bony or muscular structures, it may be impossible of detection by physical examination. But such instances are not common, and the great majority of lesions will declare themselves if the examiner is competent and painstaking. On percussion, no definite abnormality may be made out, and the only change in breath sounds may be a diminution in intensity due to decreased aeration of the diseased part. Indeed, slight deviations from the normal in the pulmonary resonance and in voice and breath sounds are so common in healthy persons that, alone, these changes are not of great diagnostic value. But the presence of rales in addition, or even alone, is of the highest significance.

In the early stage, the amount of moisture associated with the tuberculous deposit is not much; consequently, the rales are fine, are confined to a small area, and sometimes one must listen sharply to make sure of them. Indeed, they may not be detectable unless auscultation is performed with the patient coughing and thus setting in motion the minimal secretion that gives rise to the *rale* (rattle). They persist and do not clear away as the patient coughs. This finding warrants the presumption of pulmonary disease, probably tuberculous, unless further investigation explains the abnormality on some other basis. A properly exposed X-ray film should show the lesion and corroborate the diagnosis. At this stage, the sputum often is negative for tubercle bacilli because the tuberculous deposit has not yet ulcerated and discharged its germ-laden contents into a bronchus.

CASEATION AND NECROSIS

As the lesion grows older and more active, it becomes more dense. Thus, the percussion changes become more obvious, and more decided alterations in voice and breath sounds may be detected. At the same time, the center of the mass goes on to caseation and liquefaction necrosis. This means more moisture through which the air currents must pass; consequently, the rales

(*Continued on page 42*)

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are definitely more numerous and more moist. The liquefied areas empty their contents into bronchi, leaving multiple, tiny, honeycombed cavities, and, therefore, the rales become moderately coarse and sometimes bubbling, as distinguished from the fine crepitations of the earlier stage. About the periphery of the process, the rales may still be fine because necrosis may not have occurred there.

EXCAVATION

The small tuberculous deposit often excavates completely, leaving a hole one or two centimeters in diameter. The resulting cavity wall may be very thin, flaccid, and surrounded by almost normal lung tissue. Because of this peculiarity of structure, it does not constitute a good resonating chamber and, therefore, does not give rise to the changes in percussion note and breath and voice sounds so characteristic of the cavity surrounded by consolidation or by a stiff, fibrous wall. Often this fresh thin-walled cavity produces rales of a suggestively bubbling or consonating quality. If one does not appreciate the significance of such rales, he will miss most cavities, because most of them do not produce the classical text-book signs. A few "cavities" are silent in that none of these signs can be elicited.

HEALING

Tuberculosis deposits may heal by resolution or fibrosis; usually by a combination of the two. Cavities sometimes become shrunken or even obliterated by the contraction of surrounding connective tissue. Healing may thus advance to the point where the patient is entirely free of symptoms; if healing is so maintained, the disease will not relapse. Nevertheless, the patient usually bears definite scars permanently, and physical examination will reveal them. Permanent alterations in breath and voice sounds and in thoracic resonance depends on the extent, density and degree of contraction of the fibrosis. Most patients who have had active tuberculosis and recovered from it, never entirely lose their rales, even though they may remain perfectly well symptomatically. The rales are usually small and not very moist and may be detectable for years over the densest part of the old lesion.

The first examination of a patient may reveal tuberculosis in some stage of quiescence and healing. Physical signs may be of uncertain

(*Continued on page* 44)

Any one can make belts, but belts which give compression without uplift may do serious injury

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Contains No Sugar

WINTER SALAD (*Six Servings*)

	Grams	Prot.	Fat	Carb.	Cal.
2 teaspoons Knox Sparkling Gelatine	4.5	4			
¼ cup cold water					
½ cup hot water					
½ teaspoon salt					
¼ cup vinegar					
1½ cups grated cheese	150	43	54		
½ cup chopped stuffed olives	70	1	19	8	
½ cup chopped celery	60	1		2	
½ cup chopped green pepper	25			1	
½ cup cream, whipped	75	2	30	2	
Total		51	103	13	1183
One serving		8.5	17	2	197

Soak gelatine in cold water. Bring water and salt to boil and dissolve gelatine in it. Add vinegar and set aside to chill. When nearly set, beat until frothy, fold in cheese, olives, celery, pepper and whipped cream. Turn into molds and chill until firm. Unmold on lettuce leaf and serve.

SPINACH SALAD (*Six Servings*)

	Grams	Prot.	Fat	Carb.	Cal.
1½ tablespoons Knox Sparkling Gelatine	10	9			
¼ cup cold water					
1¼ cups boiling water					
2 tablespoons lemon juice	20			2	
½ teaspoon salt					
1½ cups cooked spinach, chopped	380	6		7	
2 hard cooked eggs	100	13	10.5		
Total		28	10.5	9	242.5
One serving		5	2	1.5	40

Soak gelatine in cold water and dissolve in boiling water. Add lemon juice, salt, strain and chill. When nearly set, stir in chopped spinach, mold and chill until firm. Serve on lettuce hearts or tender chicory leaves and garnish with hard cooked egg, cut lengthwise in sixths and sprinkled with paprika. Serve with mayonnaise.

If you agree that recipes like the ones on this page will be helpful in your diabetic practice, write for our complete Diabetic Recipe Book—it contains dozens of valuable recommendations. We shall be glad to mail you as many copies as you desire. Knox Gelatine Laboratories, 419 Knox Ave., Johnstown, N. Y.

*Name*_____ *Address*_____ *City*_____ *State*_____

value in determining the need for treatment, and in these cases additional evidence must be gathered from present symptomatology, sputum and X-ray examination and perhaps from a period of careful observation.

Little has been said about the gross changes in physical signs, these being self-evident as a rule. The location of the abnormal findings has a diagnostic bearing. Most often they are in the upper third of the chest. Apical rales have always been regarded of greatest significance, but often they are below the apex. In a considerable group of cases, the earliest sign is persistent fine rales in the upper third of the chest but below the level of the clavicle, and these should be taken just as seriously as apical rales. Tuberculosis at the base of the lung is not extremely rare, and adventitious basal signs should suggest this possibility when symptoms arouse suspicion.

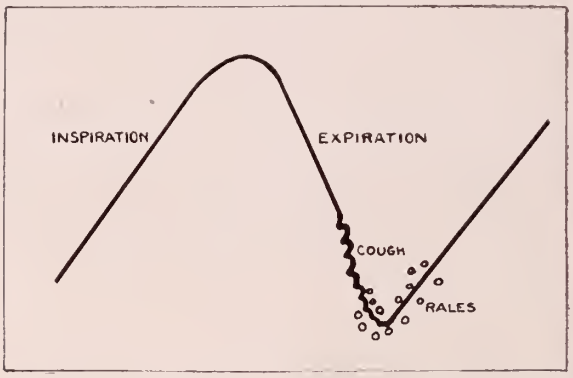


Diagram illustrating rales elicited by expiratory cough.

Of all abnormal signs in pulmonary tuberculosis, the most important is rales. Yet they will be missed in most of the early cases unless the patient's chest is stripped for examination and *unless the examiner,* while he auscultates the chest, *instructs the patient to cough at the end of each expiration.*

In all instances in which the physical examination reveals definitely abnormal signs in the lungs, an X-ray photograph should be made to substantiate the diagnosis. In patients with suggestive symptoms and negative physical signs, a radiograph should also be made, remembering that some early lesions can be discovered only in this way. Only in persons who are free of symptoms suggestive of tuberculosis and whose chests are normal on careful physical examination is it reasonable to omit the radiograph.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)

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Water (boiled, then cooled)	**16 fluidounces**

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Further details in relation to this subject are set forth in a pamphlet entitled, "The Feeding of Infants in Diarrhea", and in our book, "Formulas for Infant Feeding". This literature will be sent to physicians upon request.

Mellin's Food Co., 177 State St., Boston, Mass.



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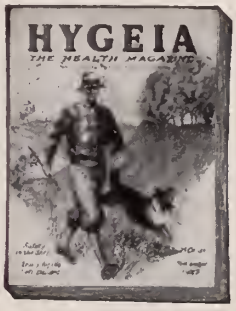
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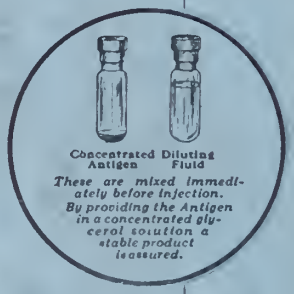
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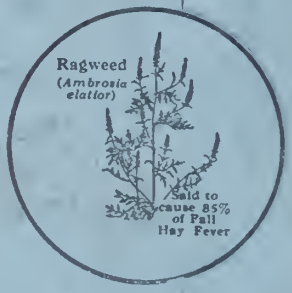
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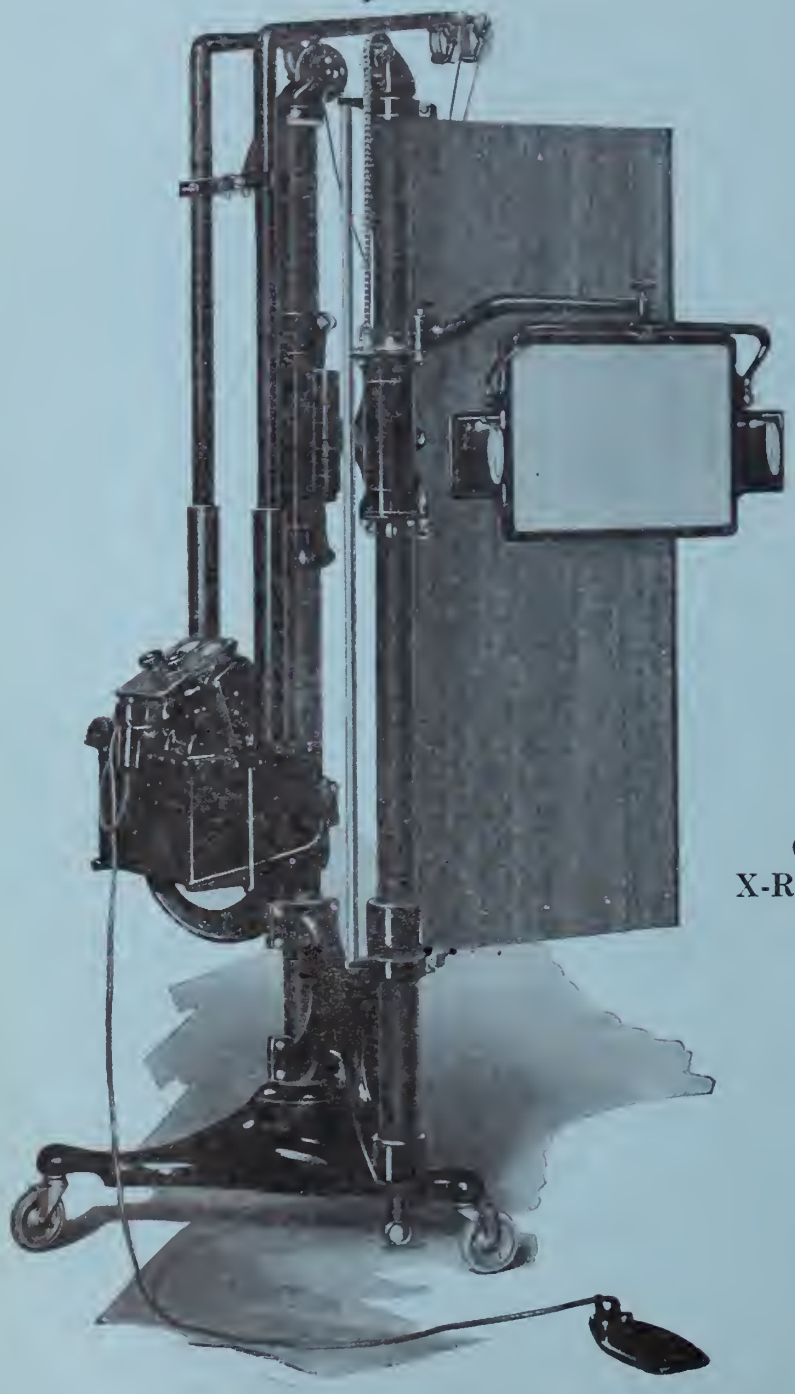
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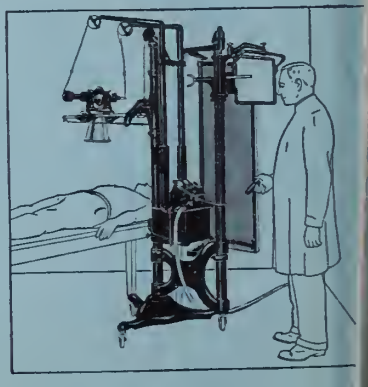
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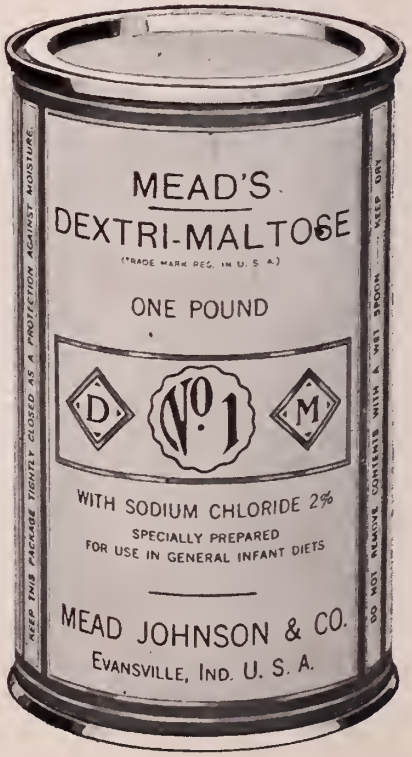
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LOCAL ANESTHESIA IN THE REDUCTION OF CLOSED FRACTURES AND DISLOCATIONS*

E. H. McRae, M.D.,
Tampa.

In perusing the literature pertaining to local anesthesia we find that Conway[1] in 1885 first used cocaine anesthesia with favorable results in the reduction of fractures in three cases of colles and one of posterior dislocation of both bones of the elbow. Lerda[2] in 1907, Quenu[3] in 1908, injected cocaine into the fragmented ends so that the bone marrow, periosteum and surrounding tissues were infiltrated. They reported favorable results and recommended its use more extensively. In 1913 Dollinger[4] and Braun[5], working independently, used procaine hydrochloride anesthesia locally for reduction of fractures. They reported excellent results and were of the opinion that the dangers of infection in the infiltration method were not to be feared. In 1921, Fulton[6] and Hagenbach,[7] working independently, used procaine hydrochloride 1 per cent by infiltration in fractures of the extremities, obtaining satisfactory results. Then Farr,[8] in 1922, reports injection of procaine dissolved in Ringer's solution and combined with a proper proportion of adrenalin, does not, according to him, devitalize the tissues or appreciably delay healing. He reduces practically all fractures and dislocations under the local method. Frostell,[9] in 1925, used 1 per cent procaine, injecting from 3 to 20 cc. directly into the fracture gap. In 1926, Ira Cohen[10] used procaine according to the local infiltration method, injecting between and around the fragments and into the surrounding muscles. He obtained excellent results in all his cases and advocated it as a very practical method. In 1928, Rice[11] gives a most complete and interesting report of his experiences in the use of 1 per cent procaine hydrochloride as a local anesthesia in the reduction of fractures of the lower forearm. He reported having treated over fifty cases in this manner with excellent results.

During the fall of 1927, I had the pleasure of visiting the very interesting clinic of Professor Lorenz Böhler, director of the Emergency Hospital in Vienna. He has been using local anesthesia for several years successfully and routinely in all closed fractures and dislocations. From the number of cases seen during my visit there, I would say conservatively, he will handle 700 to 1,000 cases a year under this procedure.

Rice[11] states: "In view of the experiences of these men, it is evident the use of local anesthesia in the reduction of fractures is by no means a new procedure, nor is it used as extensively as its simplicity and practical application should warrant."

The advantages of local anesthesia:

(1) The ease with which it can be inducted.

(2) No medical assistant, as a rule, is needed.

(3) No expensive equipment is required.

(4) Anesthesia maintained for several hours.

(5) Reduction of fracture first trial not complete—remove cast and manipulate fracture until satisfactory result is obtained.

(6) General anesthesia presents the same contraindications to its use in fractures as it does in any other condition in which anesthesia is a desirable feature. The tendency, too, is to consider the first reduction good enough, usually because of the dread of further general anesthesia.

(7) No danger of inhalation pneumonia or asphyxia as sometimes happens with general anesthesia.

Technique of Procedure

Morphine sulphate gr. ⅛ to ¼ in 2 c.c. 50% magnesium sulphate is given hypodermically to cases with severe pain, extensive fractures and those who are highly nervous. Then the skin over the location of the fracture or dislocation is cleansed with gasoline or soap and water, followed by ether or 70% alcohol—paint skin with 3½% iodine—sterile towels to be placed around the area where injection is to be made. Novocaine 2% with or without adrenalin. About 20 cc. for ordinary fracture or joint; 2 10 cc. syringes boiled, or may be left in 75% alcohol between cases; 2 sterile needles 2½ inches long and 26 gage, also 2 sterile forceps. Never touch needle with fingers. Inject directly into fracture site, even if it extends into a joint. The

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

greater the dislocation and hematoma the quicker the anesthetic spreads, and vice versa. In dislocations inject directly into the joint, *e. g.,* shoulder, hip, knee, elbow, fingers. Anesthesia present in 6 to 10 minutes or less, muscular relaxation in about 15 minutes, frequently less, and lasts for several hours, so that if X-ray after reduction is unsatisfactory, it may be repeated even four times in succession, without new anesthetic. There is slight temporary pain from the injection.

When the needle is inserted into the hematoma blood may well up into the syringe; this is readily differentiated from venous or arterial blood by its dull, faded-out appearance and also by the fact that it will continue to rise in the syringe as the needle is inserted farther or withdrawn. It is essential to reach the hematoma in order to have a thorough distribution of the novocaine around the fragmented ends of the bone.

There may be an objection or a question brought up about the possibility of infection in this procedure; in my opinion, and the experience of others, this objection is negligible. Of course strict aseptic technique must be carried out.

The following cases are illustrative of what can be done in the reduction of closed fractures and dislocations:

Case 1.—L. S. S., male, aged 36, treated Feb. 27, 1928.

Sustained an injury from a fall off a building. There was a marked backward bowing of left wrist, patient having great pain. Roentgen-ray examination showed a comminuted fracture of the distal end of the radius. The distal fragments were displaced and angulated backward. Fifteen cubic centimeters of 2 per cent novocaine injected into hematoma and ten minutes allowed for anesthesia. It took about 20 minutes to get a good alignment of the fragments. Relaxation was satisfactory. A re-examination by X-ray after the application of the plaster cast showe the fragments to be in good position and alignment.

Case 2.—J. K. M., a woman, aged 60, seen January 24, 1929. A very heavy woman received injury to right elbow by a fall from chair. Elbow swollen and very painful. X-ray of joint revealed the external margin of the condyle of the humerus to be detached and displaced downward. The head of the radius was fractured diagonally and was displaced on the external aspect at right angle to the shaft of the radius. Ten cubic centimeters of 2 per cent novocaine was injected into area of fracture; in about 12 minutes anesthesia and relaxation of the muscles satisfactory. Elbow manipulated many times in trying to get good reduction of head of radius. Patient free of pain. She refused open reduction. Arm put in flexed position and cast applied. X-ray showed fair position of head of radius, which was angulated anteriorly and fragments from external condyle of humerus to be displaced at about a forty-five degree angle. Results: there is no deformity, no pain, function good and patient satisfied 50 days after injury.

Case 3.—G. E. S., a man, aged 34, treated July 31st, 1928, had been injured while cranking a car. Received a marked deformity to right wrist. He was in intense pain. Fifteen cc. 2% novocaine injected into joint. In 10 minutes good anesthesia and muscular relaxation. Reduction carried out. Splints applied. X-ray showed a transverse fracture in the shaft of the radius about 2 cm. above lower extremity. The lower fragment was displaced slightly posteriorly, but the alignment was good.

Case 4.—E. J. S., a woman, aged 70, treated Feb. 21, 1928. Had fallen from porch, receiving an injury to left hip. Roentgen-ray examination showed a fracture of the left femur at the juncture of the neck, within the shaft. The lesser trochanter was detached and displaced upward and inward; the shaft was rotated outward. There was very little displacement. Patient was extremely nervous and in pain and movement of leg intensified the pain. Morphia sulphate gr. ¼ hypodermically. Fifteen cc. 2% novocaine injected into area of fracture by one puncture. In about fifteen minutes the patient was free from all pain. A Bucks' extension apparatus was then applied without discomfort to patient; 97 days later X-ray of left hip showed a well-formed callus sufficient for a good weight-bearing leg.

Case 5.—Z. K., a man, aged 53, treated January 3, 1928. While running fell and injured right ankle. Ankle was swollen and quite painful. X-ray showed: a fracture of both internal and external malleoli. No displacement. Twenty cc. 2% novocaine used; ten cc. injected into each side of ankle. In seven minutes ankle could be manipulated without pain. Plaster cast applied. Re-examination by X-ray showed fragments to be in good position; the end results satisfactory to the patient.

Case 6.—C. K. M., a man, aged 68, treated March 1, 1928. Had been injured by being run into by automobile, receiving a most severe deformity to lower end of right femur. Patient was in shock and suffering intense pain. X-ray examination of the right knee showed a comminuted T. fracture of the lower end of the femur. The condyles were separated and rotated forward and upward. Patient given morphia sulphate gr. ¼ in 2 cc. mag. sulph. 50%. 10 cc. of 2% novocaine was injected into the fracture from the outer surface and repeated from the inner surface, anesthesia and muscular relaxation taking place in fifteen minutes. Reduction was made without pain and plaster cast was applied. Re-X-ray the second day showed the reduction not so good. Local anesthesia was again repeated with success. Reduction carried out under fluoroscopic control and application of plaster cast. X-ray showed the position and alignment of the fragments to be greatly improved. The condyles were still separated and the internal condyle was displaced upward. X-ray of the same leg revealed an old ununited fracture at the junction of the neck of the shaft, where a false articulation had been formed.

Case 7.—M. R. M., a female, aged 53, treated April 20, 1928, had sustained injury to right leg by an auto accident. There was a marked deformity of the middle third of the leg, and X-ray showed a comminuted fracture in the shaft of the tibia just above the junction of the middle and lower thirds. The fibula was broken at the same level and again 6 cms. lower. The fragments of the tibia were displaced backward and overlapped. Those of the fibula were angulated. The patient was an Italian woman, extremely nervous, and with ordinary mentality. She appeared to be suffering intensely from the injury. Morphia sulphate gr. ¼ in 2 cc. of mag. sulph. given hypodermically. The fractures were injected with 10 cc. of novocaine 2%, from each side of leg. In about 17 minutes anesthesia and relaxation of muscles were noted. The fractures were reduced without pain and plaster of paris bandages applied. Re-examination by X-ray showed satisfactory reduction.

Case 8.—H. T., a man, aged 37, treated March 11, 1928, was thrown from an automobile, injuring right leg. He was having considerable pain. X-ray revealed a fracture of both bones just below the junction of the middle and lower thirds. The fragments were in good position and alignment. Morphia sulph. gr. ¼ with 2 cc. mag. sulph. 50% hypodermically, 15 cc. 2% novocaine was injected into the area of the fracture. In seven minutes the leg could be handled without pain; plaster of paris cast applied; re-X-ray showed good alignment of both bones.

Case 9.—J. C. R., a man, aged 75, treated May 8, 1928, had received an injury to the left wrist in an auto collision; wrist greatly swollen and angulated posteriorly; patient experiencing intense pain in the arm. Roentgen-ray examination revealed a comminuted colles fracture. The end of the radius was split into several fragments which amounted to almost a crushing of the distal end; there was also a fracture of the styloid of the ulna. Morphia gr. ¼ given hypodermically and 15 cc. of 2% novocaine injected into the fracture area. In about 10 minutes we were able to reduce the fracture and put on a moulded cast without pain. Re-X-ray showed the position of the fragments, in the main, to be satisfactory. A recent report from patient gives the information that the results were satisfactory to him.

Case 10.—F. J. E., a man, aged 40, treated September 9, 1928, had been injured from an auto accident, left elbow and upper part of forearm involved. X-ray showed an oblique fracture of the ulna about 10 cms. below the olecranon with displacement of the upper fragment toward the radius about 5 cms. There was also a fracture of the outer condyle of the humerus with only slight displacement. 10 cc. 2% novocaine was injected into the area of fracture. In about seven minutes elbow could be manipulated without pain. Arm was put up in a plaster of paris cast in the flexed position. Re-examination with X-ray showed lateral view to be satisfactory.

Case 11.—F. D. A., a female, aged 54, treated March 28, 1928, on account of being injured severely in an automobile accident. She was in considerable shock and excruciating pain of the entire body. Morphia sulph. ½ gr. was given immediately hypodermically. The X-ray revealed the following: (1) A bad comminuted colles fracture of the left wrist; (2) Dislocation of left elbow; (3) A comminuted fracture of left clavicle; (4) An oblique fracture of the right clavicle; (5) The 4th, 5th and 6th ribs in the axillary line on the right side, and of the 7th and 8th near the vertebra fractured; (6) A fractured pelvis involving the horizontal and descending rami of the left pubis. 5 cc. 2% novocaine was injected into fracture of the left clavicle, 5 cc.

into left elbow joint and 10 cc. into left wrist. Allowance of 10 minutes for anesthesia to take effect, then the left clavicle, the left elbow and left wrist were reduced consecutively. The arm was incased in plaster. X-ray check-up did not show reduction of elbow complete. The following day cast was removed from the elbow, which was again injected with 10 cc. 2% novocaine and a satisfactory reduction made. The end results of all her multitude of fractures were very satisfactory. It may be of interest to add that she drove her car from Rochester, N. Y., to Miami last month and from there came by Tampa for me to see how happy she was over the satisfactory results obtained.

Conclusions

1. Practically all closed fractures and dislocations can be reduced with local administration of 2% novocaine.

2. The procedure can be executed without additional equipment and without a detailed knowledge of anatomy.

3. Positions may be examined, checked and rechecked, retention apparatus applied and adapted by the time muscle tonicity begins to return.

4. The method is devoid of shock, unpleasantness and hazards of general narcosis.

5. It is not necessary to hospitalize the ambulatory patients, and it may be readily carried out wherever the proper aseptic precautions may be obtained, operating room, dispensary or private office.

6. The danger of infection is negligible.

7. Novocaine anesthesia is contraindicated in the presence of infection, in a compound fracture, or where it has been used only a short time previously.

BIBLIOGRAPHY.

1. Conway, J. R., Jr.: Cocaine as an Anesthetic in Fractures and Dislocations, New York M. J., 42:632-633 (Dec. 5) 1885.

2. Lerda, G.: Practical Use of Local Anesthesia in Fracture. Zentralbl. f. Chir., 34:1417-1430, 1907.

3. Quenu: Local Anesthesia with Cocaine in the Reduction of Fractures. Bull. et Mem. Soc. de Chir. de Poris, 34:976-981, (July 22) 1908.

4. Dollinger, B.: Reduction of Fracture Ends Under Local Anesthesia. Zentralbl. f. Chir. 40:763-764, 1913.

5. Braun, H.: Local Anesthesia in the Reduction of Subcutaneus Fractures and Luxations, Deutsche med. Wchnschr. 39-17-18, (Jan. 2) 1913.

6. Fulton, R. A. H.: Local Anesthesia in the Reduction of Fractures. Brit. M. J., 2:796, (March 12) 1921.

7. Hagenbach, E.: Local Anesthesia in the Treatment of Fractures of the Extremities, Schweiz. med. Wchnschr., 51:488-490, (May 26) 1921.

8. Farr: Local Anesthesia. Wis. Med. Journal, (April) 1922.

9. Frostell, G.: Local Anesthesia in the Treatment of Fractures. Zentralbl f. Chir., 52:1308-1309.

10. Cohen, Ira: Local Anesthesia in the Reduction of Fractures. J. A. M. A. 86:1896-1897, (June 19) 1926.

11. Rice, Carl O.: Local Anesthesia in the Reduction of Fractures of the Lower Forearm. J. A. M. A. 90: 1768-1772, (June 2) 1928.

DISCUSSION

Dr. J. Ralston Wells, Daytona Beach:

I would like to compliment Dr. McRae on his very interesting and comprehensive paper. I agree with Dr. Jobson that we do not use local anesthesia as much as we should. I have not personally had the desired relaxation with conduction, as I have by putting it into the fracture gap. But, possibly, that was because I did not use enough novocain.

I was very glad that Dr. McRae agreed about the point—with or without adrenalin. If used with adrenalin you do not get the quick absorption, and may get a longer anesthesia but not the absorption that you do without it.

With conduction anesthesia, it is very good in the arm as the brachial plexus is very easily found, and after 15, 20, or 30 minutes you get very good results. But, in the leg it is an entirely different matter. Even if you do know where the nerves are they are rather deep-seated. The muscles are as a rule very heavy, and after waiting a half hour you very often have to do it all over again, just waste a lot of time. In that instance I think injecting directly into the fracture gap is the proper procedure. The point of concerning reduction is very well placed because if you make a reduction not using the fluoroscope, and get a picture not entirely satisfactory, you still have plenty of time with regional anesthesia to re-reduce it into better position, that you would not have under a general anesthetic.

The synergistic action between magnesium sulphate and morphine is very good. Your local works that much better if your nervous patient can be calmed down before using the novocain. I have used this many times, using 2 cc. of a 50% magnesium sulphate with morphine sulphate gr. 1/8, given intramuscularly. May repeat 3 doses at 1/2 hour intervals. Dr. McRae stated he had reduced a fracture at night when he could not get the roentgenologist and had gone ahead anyhow. It is good surgery to treat all fractures as emergencies, because if a fracture is reduced early you don't have the results of the trauma, other than the fracture; your anesthetic works better and your parts have not become edematous. Whether you have the roentgenologist or not you have novocain, and the reduction you get, either without the roentgenogram to follow up or with-

out the fluoroscopic study, is by far to be preferred over waiting for 6, 10, or 12 hours to have your roentgenogram made, after which a more difficult procedure and not as good result is obtained.

A criticism on local anesthesia in fractures is like one I had last night in Daytona. The patient was a great, big, heavy muscled, strong man. We injected the brachial plexus and waited long enough, but did not get relaxation of the muscles, and we had to use gas and put that gas over ether before we could get a relaxation. It is true that in possibly 25% or 30% of the cases you do not get the relaxation that you might have with a general anesthetic, but the more experience we have in local conditions, the more proficient we will become. I do not think that you get the muscle relaxation that you do under general. Under general you have to wait sometimes 15 or 20 minutes, before that patient comes out, to hold the fragments in place. With local anesthesia, all of the muscles are needed to hold the bone where you put it, and an extreme degree of relaxation therefore is not always to be desired. Suit your choice of anesthetics to the patient and not the patient to the anesthetic.

Dr. E. H. McRae, Tampa (closing):

Regarding muscle relaxation: So far, I have had very little trouble in getting relaxation, provided I wait approximately fifteen or twenty minutes. If you use 2% novocain and inject enough into the hematoma and then wait you will certainly get relaxation. In all of these cases, particularly the case that showed a fracture of the lower end of the femur where the condyles were separated and the patient was a very large muscular man—we had perfect relaxation. You do not have to handle your cases roughly, particularly your colles fractures. You get a relaxation and reduction in a nice gentle way provided you use 2% novocain and place it in the hematoma.

Dr. Jobson spoke of the cranial fractures: Most cranial fractures can be done under local anesthesia. In fact, nearly all of them can. In this method all you have to know is the gross anatomy, and know approximately where the fracture is, then introduce a 2½" needle into the fracture gap, inject the novocain there, have a little patience, and I guarantee that in 95% of the cases you will have a good relaxation of the muscles and a satisfactory anesthesia.

VENOMOUS SNAKES OF NORTH AMERICA AND TREATMENT OF THEIR BITES*

FRANK T. BARKER, M.D.,
Tampa.

As a result of unusual interest in the treatment of snake bite following the recent death of a child in our community from the bite of a moccasin, the program committee of our Society was asked to have some member present a paper on the subject.

The writer, having long been interested in the subject, has volunteered to present the following, and wishes at this time to acknowledge his indebtedness for information and material to:

1. Dr. Afranio do Amaral of Brazil.
2. Dr. M. L. Crimmins of the San Antonio Antivenin Station.
3. Dr. Robert A. Strong in the International Medical Digest.
4. Dr. H. R. Eichelbaum of Panama.
5. And extracts from articles appearing in the Bulletin of the Antivenin Institute of America.

Usually if anyone mentions snakes in any gathering everyone present is very anxious to contribute information, regardless of its accuracy.

Someone is bound to speak of the hoop snake that takes its tail in its mouth and chases its victim down the hill and finally sticks its "venomous" horn into the tree behind which the terrified victim seeks refuge. The victim is saved but the tree instantly dies and falls to the ground.

In view of the fact that the dissemination of information concerning snakes has, for the most part, been by the oral exchange of persons whose normal poise has been so upset that their observations become distorted, it is not at all surprising that so much misinformation concerning snakes exists.

Herpetology has evidently been the most neglected branch of zoology. Snakes have been classified, their habits and methods of propagation studied, but after all, the sum total of the knowledge did not include a single reliable treatment for "snake bite". In answer to dissenting members let it be said that those who recovered did so in spite of the treatment.

Things have changed, however, and the serpent is being slowly but surely deprived of its terrors

*Read before the Hillsboro County Medical Society, July 2, 1929.

to man. The advance of civilization—the clearing of fields, the drainage of lowlands, the use of snake skins in the manufacture of handbags, shoes, and other wearing apparel—all have had a great part in removing this terror.

Most important, however, has been the coming of that scientific master of the serpent, Doctor Afranio do Amaral of Butantan, Sao Paulo, Brazil, to direct the creation of the Antivenin Institute of America.

Some idea may be formed of the important part Dr. do Amaral has played in the study by reviewing the progress which has been made.

The actual start of this work took place in the Pasteur Institute about 25 years ago, when Doctor Calmette immunized horses against the action of cobra venom and obtained a serum that was used to meet the serious problem which has long been known to exist in India.

About 15 years ago the eyes of the world were turned towards an institute which had been established in Butantan, Brazil, for the production of a serum for the venom of the snakes of Brazil. This department was under the Directorship of Doctor Vital, Brazil, whose studies were continued by Florenzo Gomez, who was finally succeeded by Doctor do Amaral.

The effectiveness of these sera have been shown from the fact that, when the campaign was begun, statistics of the State of Sao Paulo showed an average of 150 deaths a year from a total of 1,500 snake bites. At present the death rate has been reduced to only from 3 to 5 cases per year and these deaths can be frequently attributed to improper treatment previous to the utilization of serum.

This achievement represents 25 years of consistent effort marked by many mile-stones of discouragement. Great opposition resulted from ignorance and superstition and from perversity in many individuals otherwise mentally capable. To overcome this opposition it was necessary to educate the people by lectures, and by the distribution of pictures, and pamphlets. An arrangement was entered into between the Institute and the people living in snake-infested regions, by which supplies of serum were exchanged for living healthy specimens of venomous snakes. In this manner the Institute soon succeeded in obtaining an increasing number of snakes until it reached more than 10,000 a year, and the problem of snake bite in Brazil soon became a negligible factor.

Antivenin Institute of America. There were several in the United States who had been watching the progress made in handling this problem in Brazil, and they became intensely interested.

Incomplete statistics which have been obtained show that there are over 1,000 cases of bites of poisonous snakes in this country every year, with a death rate that averages about 22%. It was therefore realized that the time had come when steps would have to be taken to produce a serum that would be specific for the three chief venomous snakes in the United States.

One of the first steps taken towards the production of an adequate supply of antivenin serum was to invite Doctor do Amaral to take charge of the work.

It was found that the production of a polyvalent serum which would be specific for the rattlesnake, the copperhead and the moccasin would be all that would be necessary, since the only other snake in the United States capable of causing death is the coral snake. The number of fatalities occurring from this snake, however, are so few that it has been considered impracticable to produce a specific serum for this type.

Collection of Venom. In order to obtain an adequate supply of venom, stations were established throughout the United States for collecting live healthy specimens of the three varieties for which a specific polyvalent serum is being made.

The first step necessary is the preparation of the container into which the venom is going to be "milked". A sedimentation glass of about 50 c.c. capacity is covered with a sheet of rubber through which a circular opening about one inch in diameter is cut near the edge. The object of the rubber cover is to pad the edge of the glass to prevent injury to the snake's mouth.

The sedimentation glass is then fixed in a wooden block which is screwed to a table. Then the snake's head is thrust toward the cover of the glass. When the snake implants its fangs into the rubber covering pressure is applied to prevent withdrawal of the fangs and to milk out the venom. After the venom is collected it is dried and the crystals are used after dilution and preparation as an antivenin for the immunization of horses for the production of serum.

Snake venom is a thick amber-colored liquid, neutral or slightly acid, specific gravity 1030 to 1050; soluble in normal saline; when dried it forms clear yellowish-amber crystals. It is com-

posed of a powerful fibrinferment; an antifibrinferment, which attacks the coagulating element of the blood; a proteolytic ferment which dissolves muscular tissue; cytolysins which dissolve the red and white blood cells, endothelial and nerve cells; antebactericidal substances of the nature of an anti-complement; neurotoxins with an affinity for the nerve terminals of the muscles; a neurotoxin, with a special affinity for nerve cells and a substance which attacks the cardiac muscle and causes the heart to stop in systole in some cases.

It will be noticed then that this venom is hematoxic and neurotoxic, which is contrary to the former teaching that it was exclusively hematoxic.

The amount of venom secreted at one time by a snake varies greatly according to size and age of the specimen, conditions under which it is kept, length of period of fasting and repose, etc.

A snake never ejects the entire content of the glands when it bites. It always holds back part of its venom, apparently for the next bite. The amount excreted at first represents but 25 to 75 per cent of the total.

How the Snake Strikes. Before outlining the modern serum treatment of snake bite, it may be well to discuss some of the methods of defense used by snakes. (The word "defense" is used because with a very few exceptions snakes will not attack a human). The venom of a snake is given to him primarily to destroy the animals which he uses for food, but, of course, he uses it also for defense.

The poison glands are situated on each side of the head below and behind the eyes, near the angle of the superior and inferior maxilla. They are surrounded with a capsule of fibrous tissue which is a prolongation of the zygomatic ligament and fibers from the temporal muscles. The excretory canal follows an upward, forward, and downward course to connect with the lumen of the fang which is not unlike a hypodermic needle. The main pair of fangs are attached to the anterior part of the maxilla and fold back against the roof of the mouth. When the snake bites, they are raised by the pterygoid bone and muscle to an angle of 90°.

It is absolutely necessary that before a rattler can strike he must coil up for a spring.

In effecting the forward thrust of the head and neck, the serpent employs only the upper part of its body and consequently is unable, under any circumstances, to strike at a greater distance than one-half its length and in order to strike effectively, at least half of the snake's body must remain on the ground, and any belief that a snake is capable of completely springing off the ground is absurd. So, if the precaution of wearing leather puttees is taken, the chances of being injured by a snake striking the lower limbs are remote for the reason that the fangs will not be very likely to penetrate the leather.

Venomous Snakes of the United States. As a general rule, most of the poisonous snakes belong to the pit-viper family which includes the rattlesnake proper, the ground rattler, the copperhead, and the moccasin.

As before mentioned, the only other poisonous snake is the coral snake, which is about two and one-half feet long and is black from the end of the nose to the back of the eyes. There is a band of yellow followed by a black band and a narrow yellow band followed by a broad red band. From this point on, there are about 14 or 15 broad black and broad red bands separated by a narrow yellow band. All of these bands are around the body, and there are two black and two yellow bands around the tail.

Practically every portion of the United States, with the exception of the extreme northeastern part, is inhabited by poisonous serpents.

Doctor Raymond L. Ditmars reports that in the past two years he has received more than three dozen large copperheads, captured within city limits of New York.

The writer personally knows of nine rattlesnakes killed in the city limits of Tampa within the past 18 months. Two of them were killed on Franklin Street.

Factors Tending to Reduce the Severity of Snake Bites.

1. The snake missing his goal. The snake does not see well during the day or before shedding, and may miscalculate the distance and strike a glancing blow without injecting venom.

2. Diminution in amount of venom, due to (a) hibernation, (b) aestivation, (c) previous exhaustion of the venom in feeding, (d) captivity.

3. Bite being inflicted through clothing that retains some of the poison.

4. Movement at the time of strike making imperfect bite.

5. Region bitten being very lean, having little connective tissue, as on the finger, toe or shin.

6. Region bitten being very fat, so that its circulation is poor.

7. Ejection of part of the venom before the snake strikes.

8. Age of the snake—very young or very old specimens produce little venom.

Physiological Action of the Venom on Human Tissues.

The hemolytic action causes a destruction of the red and white blood cells and the proteolytic action the destruction of other tissues. The antibactericidal action favors the development of gangrene as a consequence of the bite.

Symptoms of Snake Bite.

a. *Profuse bleeding* at bite due to the antecoagulative action of the venom.

b. *A fiery pain* due to the action of the venom on the nerves.

c. *Rapid swelling* due to infiltration of connective tissue by the passage of blood caused by a venom haemorrhagin of the nature of a cytolysin, which causes destruction of the endothelial lining of the smaller blood-vessels near the site of the bite.

d. Neurotoxic symptoms, *nausea and vomiting.*

e. *Rapid pulse*, sometimes double the normal and followed by very low blood pressure.

f. *Discoloration.*

Autopsy findings in fatal case of snake bite.

Rigor of death noted.

Fang punctures were found on the leg. The skin and subcutaneous tissue in the region of the fang marks were necrotic, and the entire leg was edematous and discolored. Local hemorrhages were present in the skin. The blood in the large vessels, four hours after death, was in a fluid state.

Heart—Contracted ventricles. Epicardium and endocardium were dotted with ecchymoses. The muscle was anemic and had a "boiled color" appearance.

Lungs—The pleura covering the lower parts showed petechiae, and there were a few small hemorrhagic infarcts. The bronchial trees were filled with blood-stained fluid, and a similar fluid escaped from the cut surface of the parenchyma.

Spleen—Slight enlargement noted. The Malpighian bodies were visible.

Kidneys—The peri-renal tissues showed a bloody extravasation. The parenchyma presented a waxy appearance, and the glomeruli and tubules were visible macroscopically. The adrenals were negative.

Liver—The cut surfaces presented a yellowish color, and there seemed to be a definite fatty change present.

Stomach—was dilated and filled with bile-stained fluid. Hemorrhages were visible in the mucosa.

Pancreas—Negative.

Intestines—Hemorrhages were visible in the mucosa.

Bladder—A small amount of bloody urine was present.

Microscopic Pathology corresponded with gross pathology.

Treatment of Snake Bite.

Fortunately in so many ways, snake bites are usually inflicted upon some part of the extremities. If antivenin serum is not immedately available, a tourniquet should be applied above the bite, tightly at first, but must be partially released for a few seconds at intervals of 5 or 10 minutes, so as to maintain the necessary circulation. There is no particular advantage in the making of a free incision, although there are several investigators who insist that incisions are beneficial and both sides of the question will be considered.

Doctor do Amaral very definitely contends that the free bleeding at the site of puncture does not drain off any of the venom which the snake injects. He cites experiments which he has made on mice to support this contention. Injections of minimum lethal doses into the tip of a mouse's tail were effective in causing the death of the mouse, notwithstanding the fact that the tail was immediately cut off some distance above the injection.

Opposed to this, Jackson contends that crucial incisions a quarter of an inch long over the fang mark and a double line of small cross-cuts about one-eighth of an inch deep encircling the limb proximal to the edge of the swelling are decidedly beneficial in conjunction with the serum treatment. He further insists that a very considerable amount of venom can be extracted through these cuts if adequate suction is made. In support of his contention he reports a vast number of experiments on dogs and a number of clinical experiments in humans accidentally bitten by snakes.

It is difficult to decide after a consideration of evidence presented, but Doctor do Amaral raises

another very important point, that it is a well recognized fact that venomous snakes are capable of harboring the spores of tetanus and the B. WELCHII in their mouths, and the possibility of inviting infection from these organisms by additional trauma cannot be disregarded. In view of the fact that the average venomous snake is capable of injecting from 10 to 15 lethal doses, it would seem that the amount of venom recovered through an incision with a suction apparatus would hardly be sufficient to justify the risk of a tetanus or gas bacillus infection.

The desirability of making some local application has always been included in most treatments for snake bite, and the most frequently suggested application has been that of potassium permanganate. No evidence has been adduced up to the present time to prove that potassium permanganate has any effect at all in neutralizing the venom although evidence has accumulated to show that it causes the local destruction of tissue. Doctor do Amaral has found in his experience that it is entirely useless, and its local effect may be as harmful as incisions are insofar as creating ideal sites for the propagation of tetanus and gas bacillus.

Stimulants are contraindicated for the reason that they accelerate the distribution of the venom.

Serum Treatment.

Fortunately North American snake venoms are usually slow in acting and, if the antivenin serum can be obtained within 12 or 24 hours after the bite, the chances of its being effective are very good. If the antivenin serum is available at the time of the bite, the application of a tourniquet is not necessary. It is supplied in 10 c.c. syringes and is ready for instant use. As a general rule, the content of one package is sufficient, but in the case of a young child it may be necessary to inject two doses. Likewise, if there is reason to believe that the poison injected by the serpent is unusually large, or when the symptoms develop quickly and in severe form, it is frequently advisable to give a second, third or even fourth dose both intramuscularly and intravenously at intervals of 2 to 5 hours if the condition does not improve promptly.

The results with antivenin serum indicate that it is the most reliable treatment available at the present time, and there is every indication that recovery should be one hundred per cent if the serum is given sufficiently early and in adequate amounts.

Report of Cases.

Case 1:

Girl, age 7, taken to the hospital seven hours after being bitten, three inches above the ankle by a rattlesnake. The leg was swollen to twice normal size, and was dark purple. The patient was in great pain. No other symptoms noted. General condition good. No antivenin serum was available for several days. Incisions were made over the punctures, and the leg immersed in hot potassium permanganate solution 1 :3000. This was continued for twenty-four hours, and the leg was then kept in warm permanganate dressing for several days, but did not stop the swelling and discoloration, which advanced across the abdomen to the sternum. Patient gradually recovered and was taken home twenty-one days after admittance, still somewhat weak, and with mottled purple discoloration over the area involved still present. This patient must not have received a very large dose of venom as she suffered no general toxic effects—and yet, without antivenin her recovery required several weeks.

Case 2:

A twenty-seven-year-old man admitted to hospital with two fang marks in right index finger, and severe purple swelling extending to line just below right elbow, where a tourniquet had been bound. He had great pain in the affected arm and staggered with dizziness. Bitten ten hours before entering the hospital. A 10 c.c. dose of antivenin serum was injected intramuscularly, the tourniquet removed, and his hand placed in 1 :3000 potassium permanganate. The following morning he felt so well he was allowed to go home. All pain and practically all swelling had disappeared. This patient, although suffering from general toxic symptoms on admission, was so greatly improved following administration of antivenin that he was discharged from hospital in less than 24 hours.

Case 3:

A fourteen-year-old school girl, bitten on left forearm by a rattlesnake. Twenty-six hours later when she was brought to the hospital she appeared almost dead. No pulse obtainable. Skin cold and clammy. Extremely restless and in great agony. At intervals delirious. Entire left arm and the left side of chest purple and severely swollen. No paralysis noted. Antivenin serum was not obtainable at the time. Compresses of potassium permanganate applied to arm and chest, and she was given a quarter grain

of morphine. Four hours after reaching hospital she was dead. No autopsy. It is hardly likely that antivenin could have served this patient, as she was practically dead when admitted to the hospital.

Case 4:

A nine-year-old boy, bitten by a rattlesnake in calf of right leg. Eighteen hours after accident he arrived at hospital. A ligature was barely tight enough to shut off flow of blood and lymph in superficial vessels, and certainly had no constrictive effect on deep arteries and veins. Ten c.c. antivenin serum given intramuscularly and tourniquet removed. A few hours later moderate swelling and discoloration had extended to right thigh. Discharged 3 days later in good health, the swelling and discoloration having disappeared in that short time.

Conclusions:

1. That the application of a tourniquet immediately following the bite may be of value when antivenin is not immediately available.

2. That the administration of circulatory stimulants in the early treatment of snake bite is contraindicated.

3. That the efficacy of incisions, punctures, suction, etc., at the site of the bite is not of proven value, but the contraindications are not of great importance.

4. That the local application of potassium permanganate and other chemicals is of very doubtful value, but not contraindicated.

5. That antivenin is a specific, proven beyond doubt, and should be given early and repeated as often as indicated during treatment.

6. That those who have recovered from snake bite without antivenin probably did not receive a lethal dose of the venom.

7. That both the medical profession and laity should be given more instruction concerning the subject of prevention and treatment of snake bite.

FRACTURES OF THE PELVIS*

Their Treatment by Murphy Sling.

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With the increasing use of automobiles and a subsequent increase in accidents more or less severe, fractures of the pelvis have become a fairly common form of injury. The very nature and location of the pelvis makes it necessary that force or great violence be involved in the production of its fracture. A fall from a height, a crushing injury between two moving objects as in a railroad collision or an automobile wreck, a fall of heavy timber, a mass of rock, all, are liable to produce a fractured pelvis.

These fractures are frequently multiple, and, except when produced by a gunshot injury or an automobile accident, are scarcely ever compound. They are of special importance as regards danger of life, from the possibility of damage to the pelvic contents, which may be injured either by the violence itself, the forcible displacement of the bones, or by perforation from a sharp-pointed fragment.

The fracture may involve the entire pelvis or any one of the several bones composing it. There are many types of injury produced but they may be grouped under three general headings: (1) injuries of the pelvic ring; (2) isolated fracture of the pelvic bones not affecting the continuity of the pelvic ring; (3) isolated fractures of the acetabulum or coccyx.

By far the most serious type of injury that can affect the pelvis is the one which causes an interruption in the continuity in the pelvic ring. The pelvis has three functions: first, to bear and transmit the body weight; second, to support and protect the pelvic and abdominal viscera; and third, to provide a means of attachment for muscles. Fractures involving the pelvic ring are apt to affect all three functions.

Clinically, pelvic fractures can be classified into two general divisions: those with intrapelvic injury and those without intrapelvic injuries. Fractures with injuries to the intrapelvic viscera depend on the manner of the accident and the place of its receipt. The very nature of the violence producing the fracture frequently determines the severity of the injury and the probability of complications. Direct violence from heavy blows or crushes is the most frequent cause of injury, while indirect violence transmitted from the hip or thigh is a much less common cause. Damage to the bladder, urethra and blood-vessels with less commonly, damage to the intestines in these, cases becomes the feature of most importance rather than the fracture itself.

The point at which the violence or force is applied determines the site of fracture. Force inflicted from side to side is likely to involve the crest of the ilium and pubic ramus on the same or opposite sides; from before backward, the

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horizontal and descending pubic rami suffer mainly. In younger patients, the fracturing may occur through one or all of the three developmental lines. When this occurs as a fracture of the acetabulum, the X-ray appearance is similar to that of an epiphyseal separation in the long bones. The pubis is the most frequently broken bone, next the ilium, and the ischium, rarely. Fractures of the coccyx occur usually as isolated individual fractures. Displacement is ordinarily not marked.

Symptoms.—Disability generally is instant and complete, due to the pain, deformity and shock. The pain is due, as in all injuries, to damage to the nerves involved at the site of injury.

Deformity may show by swelling and ecchymosis over the seat of injury, and the anterior spine or iliac crest may show malalignment. Crepitus, motility and local pain can often be elicited; pain transmitted by lateral pressure over the buttocks or through the thigh is very suggestive. Rectal or vaginal examination will often give confirmation, as thereby the fragments or irregularity may be felt. X-ray examination is often the means of determinative value. An ecchymosis along the perineum that diffuses into the upper and inner thigh, and over the scrotum is a pathognomonic sign. Ecchymosis that appears late and which is located any place distant from the site of impact is always suggestive of fracture of any part of the skeleton.

Urethral involvement may be indicated by bloody urine, dysuria, retention or extravasation into the perineum, where it appears as a boggy swelling. The membranous portion of the urethra is most often affected and it may be torn completely across, punctured or simply pressed upon by bone or effused blood. Later the scrotum or labiæ may be much swollen.

Bladder involvement is generally intraperitoneal and can be determined by the passage of bloody urine or retention. Careful cystoscopic examination is valuable, but should be attempted only by an experienced cystoscopist. Formerly the usual test for ruptured bladder was to inject a known quantity of sterile salt solution, and then withdrawing and measuring it. If less fluid was withdrawn than had been injected, an intraperitoneal rupture of the bladder was diagnosed. This procedure has been recognized as dangerous and is less and less employed by surgeons who handle a large number of these injuries. The extent of bladder rupture varies from a small hole to an extensive laceration. Urinary tract involvement is most often seen as a complication in fractures of the pubis.

Blood vessels such as the iliac, pubic, obturator and gluteal vessels may be torn or bruised, leading to hemorrhage or thrombosis and embolism.

Treatment.—In considering the methods of treatment, I shall speak somewhat generally with reference to treatment of complications, and more specifically with reference to a single measure that has proved very successful in the treatment of fractures of the pelvis. Shock is given the usual attention, such as morphine, atropine, external heat and hypodermoclysis.

Urinary tract damage treatment depends on its extent. If extravasation into the perineal region occurs and a catheter cannot be passed, after a few cautious trials, an external urethrotomy is performed and the torn urethra stitched at once; or, better, a drainage-tube is inserted in the bladder and repair made later if the opening does not spontaneously close. It is extremely difficult to identify a torn urethra after such an injury because the tearing of the soft parts and the clotted and fresh blood effectually obscure the field.

Bladder damage requires opening of the abdomen and layer suture of the rupture if it is not too large, otherwise it is sewed about a drainage-tube having its exit suprapubically. In any event, drainage of the skin incision and soft tissues, which might become infiltrated with urine, must be provided to prevent a subsequent breaking down of the wound with chronic fistulous formation.

Blood vessel injury requires attention only if intra-abdominal hemorrhage seems apparent.

Intestinal involvement is shown by early rigidity of the abdomen, tympanites and pain; vomiting and other signs of peritonitis may follow. Early laparotomy is indicated for suture or anastomosis of the injured bowel.

Bony damage calls for two things; reduction and immobilization. Reduction is accomplished as easily as possible. A broken crest or ramus sometimes allows replacement by pressure or manipulation and subsequent retention by pads and adhesive. Ordinarily, all that can, or, need be done for simple fracture without intrapelvic damage is to apply wide bands of adhesive about the pelvis. Extention of both lower limbs and abduction of the hips will usually produce satisfactory reduction. The foot of the bed fre-

quently should be elevated so as to adjust the weight of the two limbs and relieve the pelvis of their burden. Where there is, in addition to the fractured pelvis, fracture of the thigh or leg, the use of one or more double incline basket splints, such as the Hodgen's splint, will prove very satisfactory.

Immobilization of pelvic fractures is accomplished by utilizing the pressure and pull of muscles attached to the pelvis on the one hand and application of external pressure on the other. A most excellent method for handling any type of pelvic fracture is that worked out by Dr. Douglas P. Murphy, while he was in charge of the fracture service in Evacuation Hospital No. 1, A. E. F., during the World War. The happy results that have been obtained from the use of this method, the Murphy sling, impelled me to bring the method to your attention and outline it in detail. A Balkan frame is attached to the patient's bed, but may be improvised by using a 2x4 six feet long, lashed upright to the head of the bed and one lashed to the foot of the bed, supporting across their top a timber of sufficient size to support the patient's weight. Take a piece of strong canvas wide enough to extend from the ischial tuberosities to the twelfth ribs and long enough to loosely encircle the patient's body; make a seam at either end and place six eyelets in each seam; make a crossbar of wood two inches longer than the canvas is wide and, on two of its sides, screw six right-angle screw-hooks into which the eyelets can be hooked. Drill a hole across each end of the crossbar for attachment of pulley ropes. Pass the ropes through pulleys attached to the piece of timber suspended on the uprights and attach just sufficient weight so that the hips are supported but not raised from the bed. When placing a bed pan or sponging the patient, enough weights to support the pelvis above the bed can readily be attached. The sling should be worn for five weeks, then removed and the patient remain in bed either on a Bradford frame or with a pelvic binder for another two weeks. The advantages of this type of treatment are, constant pressure of the muscles, regulation of the pressure, reduction of pain, patient's bodily wants easily cared for, shortening of convalescence, and simplicity of apparatus.

Perhaps the advantages of the Murphy sling treatment may best be emphasized by two case histories, one without complications and the other complicated.

Case 1.—White man, age 36, sawmill laborer, injured by being struck on the left hip by a heavy timber, that was thrown backward from a gang-saw. The attending physicians made a tentative diagnosis of a fractured hip, but X-ray examination made immediately upon his arrival at the hospital disclosed the presence of multiple fracture of the pelvis, involving both rami of the left pubis and the body of the left ilium. The injury had occurred ten or twelve hours before the patient was admitted to the hospital and adequate treatment of primary shock had been instituted. There was no evidence of any complicating injury. This patient was suspended in a Murphy sling for a period of five weeks, after which he remained in bed for another week, when he was allowed up in a chair. However, he insisted on walking on crutches and at the end of the seventh week returned home and immediately discarded his crutches. Three months after his injury he returned to his former occupation at which he has been continuously employed.

Case 2.—White man, age 24, bookkeeper, thrown from automobile in highway accident, when the car in which he was riding collided with a concrete bridge railing. Seen one hour after accident, shortly after his admission to the hospital. Patient exhibited marked degree of shock and complained bitterly of severe pain whenever his right leg was moved or when pressure was made about his hips. Immediate X-ray examination disclosed a fracture of the right pubis, near the symphysis, together with a fracture-dislocation of right ilium. A small amount of bloody urine was obtained by catheter. A diagnosis of ruptured bladder was made and immediate operation confirmed this diagnosis. The rent in the bladder was closed by layer sutures and a suprapubic drain together with a soft tissue drain was inserted. Patient was suspended in a Murphy sling for a period of four weeks, at the end of which time the suprapubic opening had closed and urine was being passed normally. An adhesive plaster swathe was applied to the pelvis and he was allowed to be transferred to a hospital in Birmingham, Alabama, where he remained for two weeks longer with no additional dressing of the pelvis. At the end of that period he was able to leave his bed in a rolling chair, and was walking with crutches at the end of seventh week from date of injury. Patient has since returned to his former occupation with no

ontoward symptoms with reference to his fractured pelvis.

Fractures of the acetabulum or coccyx and other isolated fractures are diagnosed by X-ray. Treatment in each case will depend on the amount of damage and the location of the fracture. Painful fractures of the coccyx may require excision of the broken bone as a matter of relief from pain. Recovery in each case of isolated pelvic fracture is the general rule and it is surprising how little loss of function will obtain in pelvic fractures, no matter how treated, but each will have a more comfortable period of disability if given the advantages of the suspension treatment as exemplified by the Murphy sling.

REFERENCES.

Wilson & Cochrane: Fractures and Dislocations. J. P. Lippincott & Company.

Moorehead, John J.: Traumatic Surgery. W. B. Saunders Co.

Scudder, Charles L.: Treatment of Fractures. W. B. Saunders Company.

Preston, Miller E.: Fractures and Dislocations. C. B. Mosby & Company.

de Tarnowsky, George: Emergency Surgery. Lee & Febriger.

Da Costa, J. C.: Modern Surgery. W. B. Saunders Company.

TULAREMIA*

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Tularemia is an infectious disease caused by the bacterium tularense. Primarily a disease of wild rodents, secondarily it is a disease of man.

Cases of this disease have been reported from almost every state in the union, the exceptions being the New England States, Wisconsin and Washington. Up to July 31, 1928, 650 cases were reported by the U. S. P. H. S.; of these 6 were reported from Florida.

The disease was first reported in 1911 by McCoy as appearing in the California ground squirrel; later it appeared in wild rabbits. Domestic rabbits raised in rabbiteries and sold for food or laboratory purposes have never been found naturally infected, although highly susceptible by inoculation in the laboratory. Recently the disease has appeared in sheep.

The transmission to man occurs:

(1) by the bite of the horse fly.

(2) by the bite of the wood tick.

(3) by the bite of the commonly known cattle tick of the south.

(4) by the contamination of his hands or his conjunctival sac with portions of the internal organs or with the body fluids of infected rabbits, flies or ticks, and,

(5) by the bites of animals.

The transmission of the disease among rodents is probably by blood-sucking insects, although in the laboratory it has been shown that the infection will pass through the skin on the abdomen of a rabbit without an abrasion, but a pustule will form at the portal of entry. In man the same is true and many cases do not give a history of an abrasion.

Four clinical types of the disease are described:

(1) Ulcero-glandular, the primary lesion being a pustule. Later an ulcer of the skin and accompanied by enlargement of the regional lymph glands.

(2) Oculo-glandular, the primary lesion being a conjunctivitis and accompanied by enlargement of the regional lymph glands.

(3) Glandular, without primary lesion but with enlargement of the regional lymph glands.

(4) Typhoid, without primary lesion and without glandular enlargement.

The period of incubation varies from 24 hours to 10 days, the average being three and one-half days.

The onset is sudden and characterized by headache, vomiting, chilliness, chills, aching body pains, sweating, prostration and fever.

In the ulcero-glandular type the patients usually, within 24 hours after the onset, complain of pain in the area of the lymph glands which drain the area and the glands are found to be enlarged and tender, only the regional glands being involved and not those of other parts of the body. Twenty-four hours later a painful, swollen, inflamed pustule appears at the site of the infection. This papule breaks down, liberating a necrotic plug and leaving an ulcer about three-eighths inch in diameter and having a characteristic punched out, crater-like appearance. In about one-half the cases the lymph glands suppurate and abcess, rupturing through the skin, the remaining one-half glands do not break down but remain hard, palpable and tender for two or

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three months. Subcutaneous nodules are frequently noted on the forearm and appear as isolated. Nodules or the entire chain can be palpated; these vary in size from the size of a pea to 1 cm. in diameter.

Weakness, loss of weight, recurring chills, sweats and prostration are noted during the active stage of the disease which lasts from two to three weeks.

In the oculo-glandular type, the cases follow the general description of the ulcero-glandular type, except the primary localization is in the conjunctival sac, usually unilateral and characterized in the early stages by conjunctival irritation, weeping, swelling of the lids and surrounding tissues, edema of the ocular conjunctiva and usually a papule on the conjunctiva of the lower lid. The pre-auricular, parotid, submaxillary or anterior cervical lymph glands are swollen, painful and tender and in severe cases the axillary group may be enlarged. Small ulcers soon appear on the conjunctiva of both lids. The constitutional symptoms are the same as for the ulcero-glandular type, but in severe cases convulsions, delirium and stupor may appear.

The typhoid type is characterized by fever and is only diagnosed by a negative Widal and a positive agglutination of bacterium tularense.

The duration of the disease is from two to three weeks; the fever gradually declines to normal after the sudden onset with a remission after the first, second or third day, this being followed immediately by a secondary rise to the original height. During the remission of the temperature all symptoms of discomfort disappear but all return with the secondary rise of the temperature. A bilateral macular, papular, pustular or blotchy rash may be present. The convalescence is slow, usually two or three months pass before the patient is able to work due to the profound weakness on exertion.

Of the 679 reported cases 24 died; of these 6 were due to broncho-pneumonia, 2 to lobar pneumonia, 6 with maningeal involvement, 2 general peritonitis, 2 coma and renal involvement and 1 to enteritis.

The disease is usually erroneously diagnosed as "flu", septic infection, typhoid fever, pneumonia, malaria, tuberculosis, due to the glandular involvement or sporotrichitosis on account of the subcutaneous nodules.

The diagnosis will seldom fail if four points are borne in mind; viz.:

(1) a history of having dressed or dissected a wild rabbit or of being tick-bitten or fly-bitten.

(2) a primary lesion of the skin in the form of a papule, followed by a persistent ulcer or a primary conjunctivitis, followed by a persistent ulcer.

(3) persistent glandular enlargement in the region draining the primary lesion, and

(4) fever of from two to three weeks' duration. The diagnosis can then be proved by (1) an agglutination of bacterium tularense by blood serum collected in the second week of the illness or (2) by isolation of bacterium tularense from guinea pigs inoculated with material from the primary lesion or from enlarged glands or from the blood of the patient.

The bacterium is destroyed by heat of 57 degrees F. for ten minutes; therefore, thorough cooking renders infected rabbits harmless when used for food.

The treatment is symptomatic, rest in bed; the glands should not be incised.

W. E. M., age 45, male, white, single, admitted to the Alachua County Hospital Sept. 19, 1928, occupation farmer, native of Florida. Chief complaint, chills and fever, with a constant, severe frontal headache. The onset was 8 days prior to admission and was manifested by a chill which lasted from ten to fifteen minutes and followed by a temperature of 104 degrees F., which continued high from the onset, except for a remission on the second day, with frequent rigors, vomiting, bodily pain, profuse sweating and a constant headache.

On admission the temperature was 103^2, pulse 108, respiration 24. On physical examination the patient was very weak, the skin moist, a very large, firm, tender axillary gland in the right axilla and the right epitrochlear was markedly enlarged and tender. On the middle finger of the right hand a pustule 1 cm. in diameter was found which the patient stated was due to an infection following an abrasion by a splinter of wood. The patient stated that the abrasion was sustained three days before the onset of the present illness and on the same day he killed a wild rabbit and dressed it before feeding it to his kittens. With the onset of the illness the finger became swollen and on the third day of the illness the axillary glands began to swell and become tender. Forty-eight hours after admission the necrotic plug was

liberated from the pustule, leaving a punched-out ulcer and at this time 15-20 small subcutaneous nodules appeared on the extensor surface of the forearm. On the 17th day of the disease the temperature reached normal and the subcutaneous nodules on the forearm were beginning to disappear, the epitrochlear and axillary glands were reduced in size.

The State Laboratory does not furnish cultures of bacterium tularense for agglutination: therefore it was necessary to inoculate a guinea pig with the patient's blood to prove the diagnosis.

REFERENCES

Jour. A. M. A., Vol. 192, No. 6.
Francis, Edward: Tularaemia.

MEDICAL ETHICS*

H. L. Putnam, M.D.,
St. Petersburg.

During the past months many very interesting papers on the different phases of medicine and surgery have been presented to us at the regular meetings of this society. I would ask your indulgence at this time, to consider briefly with me a different aspect of medicine, namely, medical ethics and ideals.

It is not my intention to try to teach the members of Pinellas County Medical Society, medical ethics, for I am sure that many of you know more about the theory and teachings of ethics than I do, but I want to call your attention to the littleness of non-ethics and the beauties of ethics. The ethical man advances the cause of medicine, while the non-ethical man hinders the cause of medicine by his hypocrisy and his poorly directed efforts.

He has no ambition to dignify the profession, or build up the morals of his community, but only seeks to satisfy his personal greed.

To the younger men I can dare offer advice; and this advice is based on an experience of nearly forty years. Build your code of medical ethics on the golden rule and square every action of your professional life by this code. Always try to put yourself in the position of the other doctor. Try to get his viewpoint of you. If you can do this you will get a far truer vision of yourself than you can from your own viewpoint. Then, having gotten this vision, do unto him as you would have him do unto you.

*Read before the Pinellas County Medical Society, St. Petersburg, April 13, 1928.

Medicine as an art has been handed down from generation to generation; and from the very beginning of medicine the importance of medical ethics has been recognized. Medical ethics probably received its first concrete form in the Oath of Hippocrates about 400 B. C. Fundamental morals are contained therein which should be known to every medical student, and lived up to by every practitioner. Let me quote briefly from this document: "I will follow that system of regimen, which according to my ability and judgment, I consider to the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked, or suggest such counsel. I will not give to a woman a pessary to produce abortion. With purity and with holiness, I will pass my life and practice my art. Into whatsoever houses I enter, I will go into them for the benefit of the sick."

What could be finer? Mark you, that was 400 B. C.

In 1792, Thomas Percival, a physician to the Manchester Infirmary in England, wrote a rather elaborate pamphlet on Professional Conduct, which was generally followed in Great Britain, and which was used as a model for the first code of ethics adopted by the American Medical Association shortly after its foundation in 1846. The founder of the Association, Dr. N. S. Davis of Chicago, was one of the committee that wrote this code and signed it as chairman. It was also signed by Austin Flint and several others. This code was modified from time to time to meet changing conditions.

"The Principles of Medical Ethics," as it is called, of the American Medical Association is an admirable short presentation in three chapters: the duties of physicians to their patients; the duties of physicians to each other and to the profession at large; and the duties of the profession to the public.

This is a progressive age with all our environments and opportunities for pushing onward and upward in our profession. No other calling or profession has such a record of constant and unselfish devotion to suffering humanity. The entire pathway of medical research and progress is marked by footprints of martyrs of science in the advancement of medical ethics and ideals. We read that Vesalius in 1514, the noted Belgian anatomist was persecuted and censured because

he dared to study the dead body that he might better know and heal the living.

Jenner, the English physician, in 1796, as you all know, vaccinated a boy from the hand of a dairy maid, then inoculated the same boy to smallpox; the experiment was a success; he was ostracised and pictured as a devil.

Harvey, the famous English physician and physiologist, was described as an infidel because he discovered the circulation of the blood. And so on.

Our call to the service of the healing art is not the call of wealth, power, social ease, comfort, or long life full of restfulness and pleasure. We are enlisted on the side of humanity in its grim struggle with disease and death. If there is anybody in all the wide world, it seems to me, who should have high ideals and an honest heart it is the man of medicine.

Man is never born great except potentially, nor can true greatness be thrust upon him. It can only be obtained by achievement. Medical history has added the names of many illustrious men to her pages, who by persistent, conscientious devotion to service have won their laurels.

From the ranks came Koch, a John Hunter, a Murphy, an Osler, a Binnie, an Oschner and many others.

No doubt each of us have some potential ability stored within us which needs development. Then let us realize at once that we have matriculated for a lifelong course in the university of practical experience, where every patient is a study, where every symptom is to be traced to its origin and weighed as to its significance, where every examination is an exercise of skill, every operation a training in technique and every prescription a drill in sound therapeutic reasoning.

Osler says "the practice of medicine is an art, not a trade; a calling, not a business; a calling in which your heart will be exercised equally with your head." Great things have been accomplished but greater remain to be done. Every discovery in medicine has opened doors of opportunity for the physician for every one it has closed.

Lister developed antiseptic surgery with the result that the world is filled with surgeons. Medicine still has a great field for advancement. Tuberculosis has not surrendered. Cancer still remains. Measles and pertussis are still serious; while mental and nervous diseases, auto-intoxication, pneumonia, cardiac and renal disorders together with many other diseases await elucidation.

The man of widest knowledge in medicine has probably been the everyday doctor in general practice. However, medicine has grown far too great for any one man to cover the entire field and do it well. In our day, too, sad to relate, medical ethics in many instances seem to have fallen by the wayside. Our profession, that according to writers was once honored and respected by all men, and regarded as probably the highest of the learned professions, has fallen from grace.

In England they say doctors, where we say physicians, because they have no osteopaths, naturopaths, chiropractors and various other paths and faddists to assume the title of doctor. Therefore in England the term doctor confers an honor to the one addressed or spoken of, because it always means doctor of medicine.

A recent writer states that he is fearful that in some instances our noble calling is becoming too much commercialized, which gives more room for quacks and fakirs; and that too generally the profession has become obsessed with the idea of magnitude in practice rather than quality of work, or contributions to professional betterment.

"Big Business" in medicine, like in the commercial and industrial world, may produce a few medical plutocrats, but its tendency will be to lower the general professional tone, and establish false standards of practice. It is not in keeping with the ancient traditions of medicine, nor consonant with the "Principles of Medical Ethics."

Of the scoffers at the tenets of our medical creed none equals in numbers or virulence of accusations, the quasi medical sects, the "rubbers" and "healers." When concerted effort is made by the profession to require of these mushroom practitioners the same fundamental literary and scientific training which accredited physicians must take, they protest furiously, crying persecution and monopoly. Thus have these antimedical agitators and pseudo-practitioners shouted themselves into a position of prominence in the public mind.

So securely established are they that legislatures pay homage in negative action regarding reforms, and because of their substantial contributions to the advertising columns of the lay press, the latter gives them publicity.

Why is it we are compelled to have in existence during any medical era the faddists and the quasi-practitioners mentioned above? Is it because the medical profession is so small, so narrow, so unscientific as to compel the people of our land to seek something that our profession can not give them that these new and unfounded fads come into existence? I believe it is because we are not sufficiently organized, through lack of cooperation, through lack of proper representation and hearing in the legislative halls; and perhaps more largely because the people themselves are in part ignorant, careless or indifferent to their real needs in times of sickness and distress.

It does seem to me that in time the people will become educated to the fact that medicine and surgery are large enough, and progressive enough to meet all the requirements of all ages in which we live. I believe that preventive medicine when thoroughly instilled into the coming generation will be a great means of bringing the physician and people closer together. We will then have more freedom with our clientele and be compelled to recognize better ethics and higher ideals.

The "Principles of Medical Ethics" represents a most commendable effort on the part of the progressive and intelligent elements of medicine to conserve the idealism of the medical past. It seeks to elevate the standards of practice and scientific attainments, of gentlemanly and moral conduct, for the benefit of the patient first of all; for the mutual instruction and elevation of the profession; and in the interest of the public weal.

Should we ever fall from these high standards we will no longer be worthy the designation of a profession but must march in the ranks of tradesmen.

Emerson has said, "Possibly the most essential asset in life is character, the acceptance of a moral code to guide our actions." I believe this; and I believe that it applies to us, both as individuals, and collectively as a medical society.

Today we must not only go back to Hippocrates, but also adopt and teach a code based on the conditions and needs of modern scientific medicine. The world, as a whole, pays too little respect and attention to sound general ethics. We in medicine are scientists, and as such have learned to bow down before the immutable laws which control the universe. We strive to learn the laws of life and seek to obey them for our own good.

Science, as well as religion teaches us the great value of a moral code. Both teach the simple lesson of the Golden Rule.

To no group of men are sound ethics so important as to medical men.

To us they must be a religion, the controlling influence of our lives.

THE INTRACAPSULAR METHOD OF CATARACT EXTRACTION—WITH REPORT OF CASES*

William B. Hopkins, M.D.,
and
William Patterson, M.D.,
Tampa.

When one considers the mass of literature on cataract extraction there is little wonder that, aside from the ophthalmologists, there are so few, even in the profession, that grasp the cardinal principles of cataract operation. The object of this paper is to bring before you some of the advantages of the intracapsular method of cataract extraction.

Cataract operation has been performed for over a thousand years. Prior to Daviel, however, the operation consisted of introducing a needle, or a thorn, and pushing the opaque lens from before the pupil, an operation still in vogue in some remote parts of India, which, with all its crudeness, achieves a sufficient degree of success to keep it from finally dying out.

In 1745, Daviel introduced a new era into cataract surgery by taking the lens substance out of the eye, leaving, however, the capsule behind.

The greatest advance in cataract operation, in our opinion, was done by Smith of India, when he began about 23 years ago removing both lens substance and lens capsule en masse.

The lens itself is composed of three elements, namely: the capsule, cortex and nucleus. This division of the lens into substance and capsule is the basis of the two types of cataract operation in vogue today. In one type, the older one, the operation consists of rupturing the capsule, and removing the contained lens substance, but leaving the capsule in the eye. In the other, the one perfected by Smith, both lens substance and lens capsule are removed en masse, without so much as breaking the capsule.

When a new method of doing things, either in medicine or surgery, is introduced, often it is too long before the profession discovers the advan-

*Read before the Florida Midland Medical Society, Bradenton, May 4, 1927.

tages of the new method. The intracapsular method of cataract operation has had its share of adverse criticism, and on this account today is not universally done by all ophthalmic surgeons. However, Col. Smith says: "This method has come to live and dominate its opponent in the whole East and in my opinion will come to be the operation the world over 20 years hence."

From a theoretical standpoint, every advantage is with the intracapsular method, for in this operation there is no capsule left behind to invite inflammation immediately following the operation, and to develop secondary cataract later. On this point Fuchs, whose text-book is the ophthalmological Bible of over half the world, says: "The ideal cataract operation would be to remove the lens in the closed capsule, (and that is just what the Smith operation does), so that no residue of the cataract would remain, no tags of capsule could be incarcerated in the wound, and no after-cataract could be formed by thickening and folding of the capsule that has been left behind." Again, Dr. Herman Knapp, whose name ophthalmologists all over the world revere, wrote Smith: "If you can devise a method to extract cataract in the capsule, you will be a greater benefactor to mankind than Daviel. If I were not over 70 years of age, and in delicate health, I would go round the world to see how to do it."

From a practical standpoint it has to be admitted that the intracapsular operation requires more skill on the part of the operator; and it requires a skilled assistant, which the other does not. But with that greater skill comes closer approximation to the ideal operation.

Some of the advantages of the closed capsule method are: first, it can be done while the cataract is in any stage of maturity, while the other method requires months or years of ripening and the patient waits round in a state of progressing blindness and helplessness. Second, some fifty percent of the old capsular operations, subsequently develop secondary cataract, which involves another operation, with its attendant risks and inconvenience. In the third place there is much greater tendency to inflammation and iritis immediately following the operation in which the torn and ragged capsule is left behind, than in the clean intracapsular operation.

The charge is made that there is a greater tendency to loss of vitreous in the Smith operation, which is probably true, but that is not a serious objection to the operation unless the vitreous be lost in fatal quantity, which rarely occurs. Smith thinks that a third of the vitreous can be lost and good vision still be achieved. Be that as it may, there is seldom anything like that loss sustained, so that, upon the whole, it may be said that the intracapsular operation not only fulfills the ideal, but that in actual practice it is a good practical procedure, wisely resorted to by the skilled operator and equally skilled assistant, and just as wisely eschewed by the inexperienced.

In our own experience, since learning to do the intracapsular operation, we have rarely resorted to the capsular method without afterwards regretting that we did not choose the former. We believe that the many advantages offered by this operation will make it the accepted operation of the future.

The technic that we employ was described in a previous paper as follows:

We do not use a speculum at any stage of the operation. The assistant, upon whose skill depends a great degree of the success of the operation, holds the lids apart with his fingers. With a pair of toothed forceps the conjunctiva is grasped in the vertical meridian, at the lower limbus, pulling gently forward and downward, care being taken not to press upon the ball.

The puncture, and counter-puncture are made with the Graefe knife, at the horizontal meridian and the corneal section is completed without pausing. A conjunctival flap is made at the finish.

The grasping forceps are now laid aside and, with the iridectomy forceps, the iris is caught and the iridectomy made.

The patient is now directed to look up, and the operator, with a blunt hook, presses directly backward on the cornea, below the horizontal diameter, until the lens leaves the hyaloid fossa. The hook then follows up the lens, directing the pressure so as to tilt the lens upward and forward until it is finally expelled.

The iris is then replaced at the angles of the wound.

We bandage both eyes and do not remove the dressing for three days.

We have selected from our operations a few cases of the various types usually met with.

Report of Cases

Case 1.—January, 1924. R. T. L., male, age 52. Left eye injured fifteen years ago. Vision, count fingers at eighteen inches. First noticed cataract developing in the right eye six years ago;

he had not been able to work for months, waiting for the cataract to mature. We did an intracapsular operation without complications. When refracted six weeks later he got 20/20 vision.

Case 2.—January, 1924. H. R. K., male, 39. Mature cataract in right eye; light perception but not projection; left eye highly myopic; vision 20/100 with corrections. We did not expect to get useful vision in cataract eye after operation, but patient wanted it removed for the cosmetic effect. We removed the lens in its capsule. The eye healed nicely, but post-operative examination of the fundus showed old changes which prevented useful vision.

Case 3.—February, 1924. C. G., Female, age 64. Immature cataract in each eye; still able to count fingers at eighteen inches. Intracapsular operation on right eye; no complication; pretty eye from operation but an old fundus lesion, which was no fault of the operation, prevented normal vision. She got useful vision, however, and was happy.

Case 4.—August, 1924. J. R. J., female, age 52. Mature cataract in left eye; immature cataract in right eye. Patient very nervous. She had twice been in an asylum. During the operation she was fractious and there was some loss of vitreous. She was unruly after the operation and could not be kept quiet. The third day she had a hemorrhage into the anterior chamber. This patient has since died, but before her death the hemorrhage had about cleared up. The last report we had she was able to read large print and the eye was improving.

Case 5.—February, 1925. E. L., female, age 50. Mature cataract in right eye; incipient cataract in left eye. Intracapsular operation performed; there was no loss of vitreous; or post-operative trouble. She obtained normal vision.

Case 6.—March, 1925. L. C. J., female, age 89. In spite of her age and feeble condition, we did an intracapsular operation on right eye. We have just received a report on this patient. She says that she is able to read fine print, and thread a needle.

If we had done the capsular operation on this old lady and it had required an after-cataract operation, we are sure that she would not have returned for the second operation, as it required some persuasion, on account of her age, to get her consent for the first.

Case 7.—May, 1925. H. A., female, age 80. Hypermature cataract in left eye. Intracapsular operation was attempted, but the cataract was large and soft. The corneal incision being too small, the capsule ruptured when it was part way through the incision and we were unable to remove the entire capsule, thus making this a capsular operation, and an operation for the after-cataract is now necessary.

This patient does not understand why she had to have another operation, but in a large percent of the cases a second operation, after the old capsule method, has to be done.

Case 8.—June, 1925. A. C. G., male, age 48. Immature cataract in right eye; mature cataract in left eye. Intracapsular operation, during which we estimate that at least one-fourth of the vitreous was lost. In spite of this, this man gets 20/20 vision and is using the eye altogether in his work.

It is doubtful with this amount of vitreous lost, if we had left behind the capsule and some lens substance to stir up inflammation, whether the patient would have gotten 20/20 vision.

Case 9.—January, 1927. P. W. H., male, age 61. Black cataract in each eye. Says that he has not been able to see with left eye for 10 years. He has a marked ectropion of the lower lids and an old chronic skin disease, which made the cataract operation a bad risk. We did the intracapsular operation on the left eye, with good results. He now gets 20/40 vision which we think will improve very much.

CONSERVATIVE TREATMENT OF GONORRHEA*

J. Frank Cranford, M.D.,
St. Petersburg.

Before discussing this subject I am going to give you a few figures with which you may or may not be familiar.

First, that the number of cases of gonorrhea is not on the decline but even after all the work done in this line during the World War it is steadily increasing. It is first in prevalence in the U. S. Army and stands fourth in the cause of permanent discharge.

It is estimated that from 85 to 95% of all men living in cities have at some time during their lives contracted the disease. Also that 20% of all married men contract it and that 45% of these infect their wives.

*Read before Pinellas County Medical Society, St. Petersburg, Feb. 22, 1929.

It is estimated that 60 to 80% of all operations upon the female organs of generation are for lesions caused by gonorrhea, this to say nothing of the thousands who never come to operation but lead lives of semi-invalidism through the ravages of the gonococcus.

Physicians who do not see a great many cases of gonorrhea in the female may have an idea that it is a simple disease, comparing it to a few cases seen in the male; however, there are gynecologists of wide experience who believe that gonorrhea in the female is rarely cured.

Dr. Ricord has said "A gonorrhea begins, but God alone knows when it ends." It is estimated that there are 6,000,000 cases of blindness in the world, 1,500,000 being caused by gonorrhea.

As to the positive cure in the male we can sometimes say, but when the woman is cured it is almost impossible to say. I am going to limit my suggestions to treatment of the male. It has been said that should our forefathers who were physicians return they would feel perfectly at home in the general treatment of gonorrhea. I believe that one of our greatest drawbacks to intelligent treatment is gotten from some of our modern text-books, in that they lead you to believe that an uncomplicated case should be cured in two or three weeks. Dr. Corbus insists that gonococci can not live but a few minutes at a temperature of 113 degrees F.; he also states that he has seen numerous cases cured when the patient had a temperature of 102 F. for several hours.

Dr. Pelouse has shown that the germs will survive after 30 minutes at 113 degrees; also they will live after being submerged in ice for 24 hours. I cannot imagine a nicer treatment than to introduce a heated sound, increase the heat to 113 degrees, leave it in place for thirty minutes, have the patient return next day, repeat the treatment and feel assured that the patient is cured, but such is not the case.

Dr. Cabot, after naming nine different drugs, lays stress on the value of acriflavin 1-4000 or 5000, to be used by the patient as an irrigation. He states that in 50% of cases seen within four or five days after the discharge has started, you should expect a cure within two weeks. Dr. Valantine reports numbers of cases cured within two weeks with irrigations of potassium permanganate; however, he does not say how many were not cured in 4, 6, 8, or 10 weeks.

Dr. Young reports the cure of many cases after one or two intravenous injections of mercurochrome, 1% solution, 5 to 25 c.c. doses. His tabulation shows that of 26 cases so treated 20 were cured. He also tabulates 5 cases of gonorrheal arthritis treated in the same manner with 100% cures. This would lead you to believe that mercurochrome was almost a specific for gonorrhea.

Dr. Keyes suggests the use of acriflavin 1-5000 to be used only by the physician as it can do great damage even in comparatively weak solutions, and after naming six or eight drugs does not claim either to be outstanding as a cure.

You will see that the men who are considered authorities on this subject are constantly contradicting each other, thereby causing confusion. After reviewing quite a number of books on this subject I believe that there is one condition which does more to retard the cure and produces more complications than any other, and that is TRAUMA, either physical or chemical.

It is estimated that perhaps 90% of the cases in this country are treated by the general practitioner, who will readily admit that he knows very little about the disease, and many of our distinguished urologists who are doing much surgery and research work pass up gonorrhea.

The methods of treatment at the present time consist of two extremes: first, by oral medication, the physicians using this treatment evidently thinking that gonorrhea is a self-limited disease, knowing full well that any medicine given internally is not capable of destroying the gonococci while being expelled through the urethra; second, in this class are those who believe in the direct application of drugs strong enough to kill the gonococci, forgetting that these germs burrow below the surface and in order to reach them the mucous lining of the urethra must be destroyed.

In search for the best method of treatment we must not follow either of these extremes. However, I believe should I choose one it would be the oral medication with great quantities of water, knowing full well that with cooperation from the patient I had not caused any of the severe complications resulting from the improper use of or too strong medication.

In order to intelligently treat a given case of gonorrhea we must first get the full cooperation of the patient and impress on him the importance of gentleness in treatment and to avoid sexual

excitement, over-exertion, strenuous exercise and alcohol. Explain to him the specific location of the lesions and that any treatment must be directed only to this location. Explain the importance of drinking quantities of water and see that there is free drainage from the urethra. Should a pledget of cotton be used to protect the clothing, impress the importance of changing this cotton at each act of urination.

Now as to the local treatment, it seems that most authorities, after naming numerous drugs, come back to potassium permanganate. Just how this exerts its beneficial action is not clearly known. Next in favor comes the silver salts, remembering that any solution which causes a pronounced burning is perhaps doing more harm than good. Most physicians in their eagerness to get an early cure use this class of drugs in too concentrated solutions.

Any pronounced astringent is absolutely contraindicated, especially in acute or sub-acute cases. Large doses of vaccine in acute or sub-acute cases is condemned by most authorities.

I am not going to discuss the treatment of any of the many complications of gonorrhea, except the acute anterior and posterior conditions. When the patient presents himself for examination, after going into the history, make careful examination of the penis, as to abrasions, swelling and edema. After cleansing the glands and meatus and having made smears, have him pass his urine in three glasses. This is, I believe, the best way to determine the location of the lesions. Should the lesion be located in the anterior portion then all medication should be limited to these parts. I have obtained best results from the following treatment: after instructing the patient as to gentleness and drinking great quantities of water, irrigate the anterior portion of the urethra with 1-8000 solution of potassium permanganate, at about 105 or 110 degrees, having solution about 18 inches above level of his bladder, allowing solution to run in and out under very little pressure. This gets rid of or cuts away any mucous and pus that may be in the anterior urethra. After this is done, inject about 10 c.c. of 5% solution of freshly prepared neo-silvol or argyrol, holding this in place for five minutes. This treatment is to be given morning and evening. As the discharge diminishes, increase the strength of medicine potassium permanganate 1-5000, neo-silvol or argyrol to 10% and see the patient once a day. If still further improvement follows, see him every other or third day, having instructed him in the proper use of the medicine. Should the discharge become thin and of small amount, substitute protargol ¼% solution in place of neo-silvol or argyrol, using the potassium permanganate as before. When the discharge shows only the morning drop, increase the protargol to ½% solution. Usually the discharge will be gone within six or eight weeks and the complications are reduced to a minimum, after which sounds may be passed to see that there are no strictures. Should the posterior urethra become involved (which is shown by the three-glass test and symptoms), all local treatment should be omitted and oral medication of sedatives and large quantities of water instituted. After the acute symptoms subside we can then proceed with posterior irrigations of potassium permanganate, 1-8000, this to be done each day, having the irrigator not more than three feet above level of the bladder. After each treatment with irrigations about ½ ounce of 10% solution of neo-silvol or argyrol is introduced into the bladder (glass syringe with rubber bulb being used for this) and left there for an hour.

As the condition improves increase the potassium permanganate to 1-5000. In course of time the discharge disappears and then a few gentle massages of prostate are given. Should the secretions show no gonococci, gently pass a few sounds to determine if there are any strictures or latent infection.

It has been said that the ten most common drawbacks to the treatment of gonorrhea are:

(1) Faulty knowledge regarding the disease.

(2) Lack of uniform ideas regarding the treatment.

(3) The ready acceptance of a chemical that is capable of killing gonococci.

(4) Little regard for the patient's own part in the cure.

(5) Giving instructions to the patient as to the mode of treatment that he cannot carry out.

(6) Inability to follow the course of the disease.

(7) Common neglect in real diagnosis.

(8) The use of diagnostic procedures at a time when they do great harm.

(9) The lack of effort to prove that the disease is really cured.

(10) The most unfortunate lack of real interest in the disease.

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CRIPPLED CHILDREN'S ACT

An act was passed by the last State Legislature authorizing an appropriation of $50,000.00 per annum to be used in the care and treatment of the indigent crippled children of this state. The money is to be expended under the direction of a commission of five citizens appointed by the Governor. This commission has the power of selecting suitably equipped and located hospitals and properly trained surgeons for treating the crippled children in the various sections of the state.

The bill authorizes the Probation Officer or the County Judge to pass upon the eligibility of any child for treatment by the state. Children of average mentality not over sixteen years of age, white or black, are eligible for treatment under this act.

The bill was sponsored by the Florida Department of the American Legion. It was passed

with remarkably little opposition in either house and has been signed by the Governor. Up to date the commission has not been appointed; therefore, nothing has been done as yet. It is hoped that the finances of the state will be in condition to warrant the beginning of this work in the near future. Until then the State Board of Health will continue to treat as many of the crippled children of the state as their limited funds will permit. It is estimated that there are some two to three thousand crippled children in this state who could be totally or partially rehabilitated. There is a constant waiting list of those anxious for treatment which the state is not yet able to provide.

MORBIDITY IN THE RECENT INFLUENZA EPIDEMIC

The United States Public Health Service has recently announced the results of surveys in certain cities concerning the influenza epidemic of 1928-29. Although full analysis of the data collected will require considerable time, some preliminary tabulations have been made which suffice to show approximately the gross morbidity rates in the several localities studied.

Because of the almost prohibitive difficulties and expense of canvassing rural communities, the surveys were limited to large cities; and these were chosen with a view to representing as many sections of the United States as practicable. Those selected were as follows: San Francisco and Seattle, on the Pacific Coast; Des Moines, Kansas City (Mo.), Cincinnati, and Pittsburgh, representing the Middle West; New Orleans, as a southern city; and in the northeast, Baltimore, Syracuse, and Boston. It was later found practicable to add a single small city, Farmington, Mo.

In order to afford sufficient numbers for a statistical analysis, the sample canvassed in each locality (except Farmington) comprised not less than 10,000 persons, and in cities of more than 400,000 inhabitants, this number was increased to 15,000 or more. To secure a representative sample a total of 12 to 20 districts were marked off in each city, and in each of these districts a systematic house-to-house canvass was made.

It is fully recognized, however, that all records are subject to certain obvious but practically inevitable errors, due principally to lack of definitive criteria for the diagnosis of influenza, and to lapses of memory on the part of the householders from whom the information was obtained. These causes tend, respectively, to uncertainty in the diagnostic classification of reported cases, and to omission of a certain proportion of cases, especially those which were not of sufficient severity to leave a lasting impression upon the memory.

As regards diagnostic classification of cases, enumerators were instructed to inquire concerning the occurrence of "influenza," "grippe," "pneumonia," or "colds," and to record for each case the diagnosis given by the householder. Presumably all the cases reported as pneumonia had been so diagnosed by attending physicians; and a preliminary check of the records indicates that this was true also in a large proportion of the cases classed as "influenza" or "grippe." Also it is probable that the cases so diagnosed were usually of sufficient severity to be remembered by the householders and reported to the enumerators. Therefore, with full recognition of all the probable sources of error in reporting, it is believed that the records as to these classes of cases have a fairly definite qualitative and quantitative significance.

On the other hand, a large majority of the cases reported as "colds" had not been attended by physicians; and it is well known that ordinary colds are likely to be forgotten within a few weeks. Hence, it may be inferred that the record of colds is far from complete, and that it probably includes cases of more or less heterogeneous type.

The total number of cases of influenza and grippe, pneumonia, and colds per 100 persons canvassed for the several States, was as follows: San Francisco 34.1; Seattle 30.9; Kansas City, (Mo.) 27.1; Farmington, Mo., 37.7; Des Moines 47.1; New Orleans 29.6; Cincinnati 27.0; Pittsburgh 25.2; Baltimore 15.1 (exclusive of colds not confining the patient to bed); Syracuse 26.8; Boston 23.5.

The average of all these localities except Baltimore was 29.7 cases of influenza, grippe, pneumonia and colds per 100 persons canvassed. Nearly 15 per cent of the population canvassed in all localities surveyed in 1929 gave a history of having suffered attacks of influenza or grippe, while 0.47 per cent gave a history of pneumonia and an additional 14 per cent reported "colds" which may or may not have been directly related to the epidemic.

The incidence of pneumonia is shown to be about one-third as high in the epidemic of 1928-

29 as in that of 1918. It is probable that the disparity between the two epidemics is greater than these figures would seem to indicate since the periods covered by the 1928-29 record are generally longer than those covered in 1918. Moreover the 1918 epidemic occurred at a season when the prevalence of pneumonia is normally rather low, whereas the recent epidemic occurred at a season when the prevalence of pneumonia is normally rather high and increasing. Mortality records indicate a much greater disparity between the 1918 and the 1928-29 epidemics; apparently the cases in the latter epidemic were of a much milder type.

STATE NEWS ITEMS

Marion County Medical Society is at the present time the largest society to have 100% of membership dues paid for the current year.

* * *

The many friends of Dr. L. M. Anderson of Lake City will be glad to know that he is convalescing after an illness of over five weeks' duration.

* * *

Columbia County Medical Society is again in the 100% paid group. The records in this office show that this is the third consecutive year that Columbia County has been in this class.

* * *

Dr. and Mrs. H. Quillian Jones of Ft. Myers announce the birth of a son, July 4th. The little lad has been named H. Quillian Jones II.

* * *

Dr. Chas. D. Cleghorn announces the removal of his offices from the Ralston Building to Suite 1109 Huntington Building, Miami.

* * *

St. Johns County Medical Society is proud of its record. The dues for all members of this society were paid before March 1st.

* * *

Dr. Franklyn Thorpe of Tampa is spending some time in southern California. From there, he will travel north and return by the way of the northern route. He expects to visit the important clinics en route and return to Tampa after a vacation of two months.

* * *

Dr. John S. McEwan of Orlando, on a vacation trip, recently spent two weeks in Boston attending clinics and visiting old friends. He also spent some time at his old home in Cooperstown, N. Y.

Dr. W. P. Duncan announces the removal of his offices from 201 Krause Building to 401 Tampa Theatre Building, 709 Franklin St., Tampa.

* * *

Taylor County Medical Society has again stepped to the front with 100% of its membership dues paid. Congratulations!

* * *

Dr. and Mrs. E. S. Estes are spending the summer at their attractive beach cottage on St. Augustine beach.

* * *

The Pasco-Hernando-Citrus County Medical Society recently met with Dr. T. F. Jackson, president, at Dade City. Dinner was served at the Osceola Hotel, after which a scientific meeting was held in Dr. Jackson's office. Clinical cases were reported and liberally discussed. Those present were: Drs. Geo. R. Creekmore, L. T. Furlow and Wm. S. Hancock, Jr., Brooksville; Geo. A. Dame and J. F. Miller, Inverness; T. F. Jackson, Dade City; A. B. Cannon, Lacoochee; and J. T. Bradshaw of Lake Jovita.

* * *

Dr. James K. Biddle announces the change of his address from Daytona Beach to Walpark Building, Mansfield, Ohio.

* * *

Monroe County Medical Society has just sent in a check to cover dues for its last delinquent member. This society is now 100% paid.

* * *

Dr. H. Quillian Jones of Ft. Myers announces his association with Dr. J. William Jones; also the removal into larger offices at 18-19-20 Leon Building.

* * *

Dr. and Mrs. J. A. Smith of Homestead left recently for Kansas City, Mo., where they will visit Mrs. Smith's sister.

* * *

Dr. Joel Whitaker announces a change in his address from 905 Congress Building, Miami, to 401 Chamber of Commerce Building, Indianapolis, Indiana.

* * *

Dr. Wm. J. Knauer and family of Jacksonville recently returned from a trip by boat to Canada. They spent some time in Halifax, Quebec and New York where Dr. Knauer visited medical centers.

Madison County Medical Society is one of the "live" medical organizations in this state. 100% of membership dues have been received from this society.

* * *

Dr. Oliver James Hart announces the change of his address from Tampa to the New York Post-Graduate Medical School and Hospital, 301 East 20th St., New York.

* * *

Dr. T. S. Field of Jacksonville left recently for New England. He is making the trip by motor with his family.

* * *

Dr. Ferdinand Richards of Jacksonville has recently returned from Los Angeles where he attended the Shrine Convention. During his visit in Los Angeles, he inspected the hospital for crippled children which is operated by the Shrine.

* * *

Our youngest society, the Washington-Holmes County Medical Society, has come to the fore with 100% of dues paid for 1929.

* * *

The Suwannee River Medical Association met July 22d at Sis Hopkins' Inn, Madison. Dr. Herbert Caldwell presented a paper on "Nephritis". The August meeting of the Suwannee River Medical Society will be held in Live Oak.

* * *

The many friends of Dr. Wm. N. Parkinson, formerly chief surgeon of the Florida East Coast Railway and Hospital, will be interested to know that he has been appointed Dean of the Temple University School of Medicine in Philadelphia.

* * *

The Pasco-Hernando-Citrus County Medical Society has not disappointed us. It is an active organization. Membership dues—100% paid.

* * *

Members of the Dade County Medical Society and their wives enjoyed a banquet at the Miami Country Club July 6th, following which there was a bridge party and dancing. The afternoon preceding the banquet, a handicap golf tournament was enjoyed by the members of the Society.

* * *

Dr. Dana V. Clark, field representative for the American College of Surgeons, is at the present time engaged in surveying the hospitals of the state.

* * *

Dr. J. Knox Simpson of Jacksonville left recently for the north and expects to be gone several weeks, during which time he will visit the Mayo Clinic at Rochester. He will also visit clinics in Chicago and Cleveland.

* * *

The next meeting of the State Board of Medical Examiners of Florida will be held in Miami, November 19th and 20th.

* * *

The Walton-Okaloosa County Medical Society has been 100% paid since last February. However, that is not surprising as this is the third consecutive year that dues from this society have been fully paid before the time of the annual meeting.

* * *

The following item appeared in the June, 1929, Bulletin of the Federation of State Medical Boards of the United States:

"According to the letterhead of a circular letter dated May 1, 1929, sent out by H. M. Harper, M.D., president of the 'Florida Sanatorium,' Tampa, Florida (not listed in the files of the American Medical Association), G. A. Munch, 'M.D.D.' is the chief consulting physician of the institution. Dr. Munch, former secretary of the Florida Eclectic Medical Examining Board, was convicted a second time in the federal court at Tampa, February 16, on the charge of selling fake medical diplomas and licenses and again sentenced to serve five years in a federal penitentiary and pay a fine of $1,000. He was similarly sentenced two years ago. (Bulletin, October, 1926, p. 241; March, 1927, p. 74; April, 1927, p. 104; May, 1928, p. 134; March, 1929, p. 63.) The circular accompanying this letter which was addressed to 'Dear Doctor' contains a discourse on Ec-lec-to-pathy which is 'briefly, a Medical Science that, with its Special Diagnosing system, locates the disease and its causes; which permits DEFINITE and DIRECT treatment with SPECIFIC and SELECTED remedies.' It goes on to say that eclectopathy is so simple that anyone of fair education can in a very few months be skilled in this 'science.' The circular pictures Dr. Munch as a very modest man yet claims that proof can be furnished that he is the best qualified physician, not only in Florida but in the world and gives the impression that he is still practicing in this so-called 'sanatorium.'"

* * *

Our smallest, though not least important, society, the Hamilton County Medical Society, is 100% paid for the current year.

An Institute for Tuberculosis Workers will be conducted at Nashville, Tenn., September 10th through 24th, 1929, under the auspices of Vanderbilt University, in cooperation with the National Tuberculosis Association, the Southern Conference on Tuberculosis, the Tennessee Tuberculosis Association and the Tennessee State Department of Health.

This training course will be conducted by Philip P. Jacobs, Ph.D., Director, Publications and Extension Service of the National Tuberculosis Association. The committee on local arrangements and program includes James P. Kranz, Southern Conference on Tuberculosis; Dr. E. L. Bishop, Tennessee State Department of Health; Dr. W. S. Leathers, Vanderbilt University School of Medicine, and S. L. Smith, Field Worker of the Rosenwald Foundation.

Application for the Institute and further information can be secured from Sherwood H. Smith, Florida Public Health Association, 507 Dyal-Upchurch Building, Jacksonville, Florida.

* * *

Dr. and Mrs. A. C. McKenzie of Jacksonville, during their summer vacation, recently visited Baltimore, New York and Maine.

* * *

Dr. F. L. Fort of Jacksonville was a member of the American crew of 150 orthopedic physicians who attended the joint meeting of the American and British Orthopedic Associations in London in July. While on this trip, Dr. Fort also visited clinics in New York, Liverpool and London.

* * *

Drs. G. F. Oetjen and C. B. Mabry of Jacksonville recently returned from an extended European trip. They first visited Germany and spent some time in Bremen, Hamburg and Berlin. While in Berlin, Dr. Mabry took a short course in gynecology under Dr. Strassmann and Dr. Oetjen a course in urology under Dr. Eugene Joseph of the University of Berlin. They visited the clinics in Vienna and called at the headquarters of the American Medical Association in that city. Later, they visited Paris and other points of interest in France.

Drs. Oetjen and Mabry state that the two things which most impressed them were: (1) the splendid opportunities for American doctors to study in Germany today and (2) the development of air travel in Europe. This is the accepted mode of transportation and most of the trips taken by the doctors were by plane.

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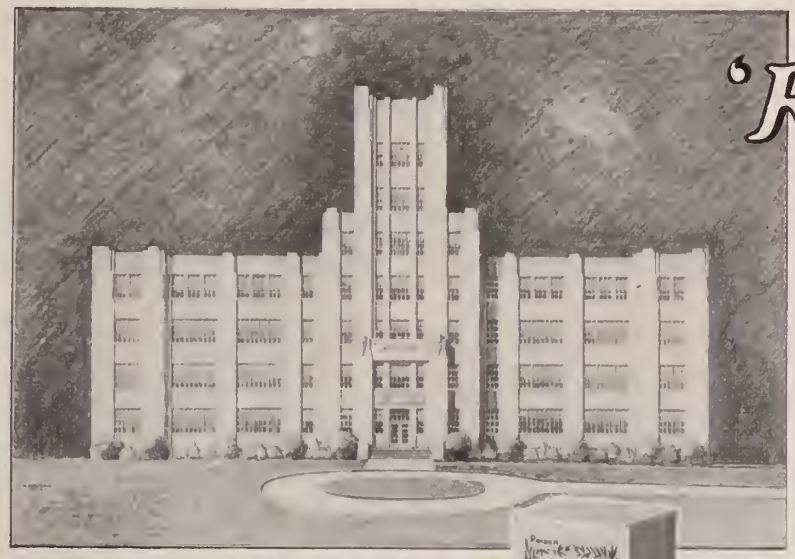
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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION



THIS number is contributed by Homer L. Sampson, roentgenographer of Trudeau Sanatorium, who speaks with appreciation of the writings of investigators, such as Allen K. Krause, whose researches are shedding light on the evolution of pulmonary tuberculosis from the first invasion of the bacillus to the death of the tissue involved. He looks forward hopefully to the perfection of a method that will reveal the

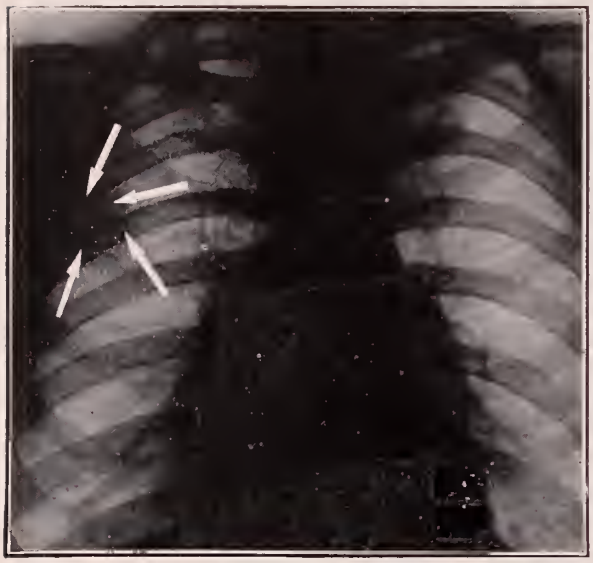


FIG. 1. Film taken prior to the administration of tuberculin, subcutaneously.

early macroscopic changes in the development of pulmonary tuberculosis in the living individual, and submits that at present the only aspirant to that honor is the roentgenograph. At the same time, he warns that the X-ray picture at best is but a link in the chain of evidence and that final conclusions cannot be drawn from it alone.

SERIAL ROENTGENOGRAPHY AND THE EVOLUTION OF PULMONARY TUBERCULOSIS

To allude to the "film" as a "living pathology" may be an exaggeration, but stereoscopic films of the chest may rank as a means of studying living pathology. Before such a goal may be securely established, however, considerable standardization will be necessary. This short resume de-

(*Continued on page* 88)

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scribes a standardized technique that produces satisfactory results for the study of the evolution of pulmonary tuberculosis, together with a few remarks on the uses of such a method.

The X-ray "picture" is a most valuable aid in the diagnosis of pulmonary tuberculosis. The "film" also reveals a variety of shadow combinations in various phases of evolution that go hand in hand with the clinical course of the disease. It is desirable, therefore, that a method be evolved that will enable us correctly to register the various changes that are present in the lung or that may later take place. While the film reveals only shadows, these shadows portray an anatomical or a pathological condition existing in the chest. Yet, we are not to infer from this that the film reveals every anatomical or pathological change in the path of the ray; a small area of disease may be so located as to escape detection, due to the overlying denser tissues—anatomical or pathological. Nor is one always able to determine the character of the structure or outline of a given shadow. Experiments have shown that an object having geometric form may often be seen in a field, whereas one not having a definite shape or outline may be practically lost in the same field. Dr. Kennon Dunham has aptly used the aphorism, "shadows do not lie," but inexperience may make inferences faulty.

MANY ROADS LEAD TO ROME

There are many ways to obtain good films. The one important point is to be sure that the factors involved in the making of a film are as you suppose them to be. Also, it is not of so much importance that a film should be of an exact density as it is that one may be able to reproduce results that are within reasonable limits of density and comparable. The technique now in use at the Trudeau Sanatorium is as follows:

Eastman duplitized films—Eastman developer, 100 M. A. Coolidge Tube—Kelley-Koett Tube and Cassette shifter. Double Intensifying screens. Snook Transformer. Distance 48 inches—milliamperes 100—time 1/15 second. Kilo voltage is variable for different chest depths.

A variety of opinions is held by many leading roentgenographers as to which technique produces the most satisfactory chest film. Two factors of considerable importance are the length of exposure and the tube film distance. With the ever-increasing power of X-ray machines and tube capacity, it is possible to cut the time down

(Continued on page 90)

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to 1/120 of a second with the possibility of this being shortened; but the question arises, is there any need of working faster than a speed that is sufficient to arrest satisfactorily the shadows of the moving parts, which can be done in many instances with 1/15 or 1/20 of a second?

SERIAL FILMS ARE VALUABLE

Serial films in the study of the progression or retrogression of the pulmonary disease are valuable. This does not apply alone to pulmonary tuberculosis; but as pulmonary tuberculosis is so often a chronic process, it is not strange that investigators wax enthusiastic when they find how often the progress of the disease can be followed and how frequently the various changes that take place in the lungs fit in so nicely with the clinical or symptomatic behavior of the patient. At the Trudeau Sanatorium for the past ten years, the evolution of pulmonary tuberculosis in upwards of 3,000 patients has been followed over the usual period of residence at the Sanatorium. In many instances, the serial work has been carried on for years after discharge from the institution.

Early infiltrations have been followed through the various intermediate steps or phases until apparently a complete resolution or, as is more often the case, organized fibrosis takes place months or years later. Many collateral inflammatory reactions or new foci, as the result of repeated exacerbations, have been seen to develop in the course of the disease. These also can be seen to resolve or progress as the case may be. While many early changes can be recorded on the stereographic films, it is not to be inferred that the film is capable of registering the earliest tubercle formation. However, through experimental work instituted by Dr. Lawrason Brown and carried on at the Trudeau Sanatorium, we were able to demonstrate roentgenographically tubercles in the lungs of rabbits fifteen days after inhalation of bacilli.

SHADOWS OF EARLY LESIONS

How long might the disease have existed before it registered on the films? There is no doubt but that the first proliferation of cells incident to the presence of bacilli might easily fail to register a sufficient shadow to be recognized. This condition may occasionally be inferred when rales develop in an area where before there were none and when subsequently shadows appear in the film at this site. Cavity formation has been ob-

(*Continued on page 92*)

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The following is the formula prescribed by authorities in infant feeding: Soak, for about ten minutes, one level tablespoonful of Knox Sparkling Gelatine in one-half cup of milk taken from the baby's formula; cover while soaking; then place the cup in boiling water, stirring until gelatine is fully dissolved; add this dissolved gelatine to the quart of cold milk or regular formula.

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served from incipiency through the subsequent progressive stages until in some instances a whole lobe is excavated. In many of these cases, there is observed a zone of localized haziness surrounding the cavity wall.

Again may be observed the progression of cavity formation to the phase where it may cease to grow, followed by a slow or rapid dissolution of the so-called ring or annular shadow or area of rarefaction, until little or no trace is left of the previously present cavity.

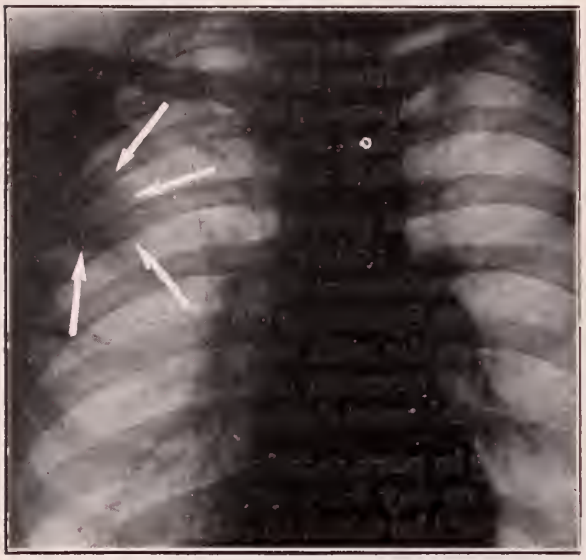


FIG. 2. Film taken during the height of tuberculin reaction. Note increase of area of cloudiness.

Very recently, serial films of certain cases have been taken as often as twice a week. In such instances, where specific foci are being watched, it has been possible to record very small changes taking place from time to time. The progression or retrogression of small cavities can be measured almost in millimeters. Where only one limited field is being studied, small stereoscopic or single films, size 5x7 inches or 6½x8½ inches, can be utilized to great advantage.

In a patient manifesting definite symptoms, the physician is enabled often to direct his attention to other organs when serial films exclude the lungs as being the seat of trouble.

The advantage of serial studies is evident only after rigid standards are followed and checked up with the clinical and laboratory data at hand. Then the study of the pulmonary disease offers many avenues of interesting and instructive investigation.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)

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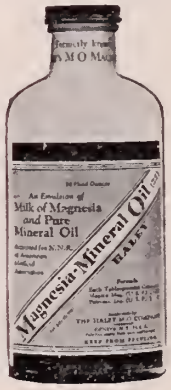
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This mixture contains proteins, carbohydrates and mineral salts in a form readily digestible and available for immediate assimilation.

The need for protein is well understood as is also the value of mineral salts, which play such an important part in all metabolic processes. Carbohydrates are a real necessity, for life cannot be long sustained on a carbohydrate-free diet. It should also be stated that the predominating carbohydrate in the above food mixture is maltose—which is particularly suitable in conditions where rapid assimilation is an outstanding factor.

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[*A similar advertisement appeared in the Journal of Biological Chemistry in January, 1928*]

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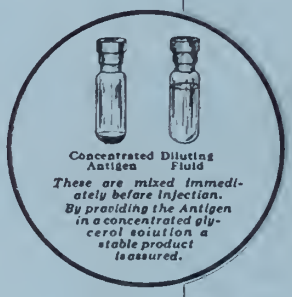
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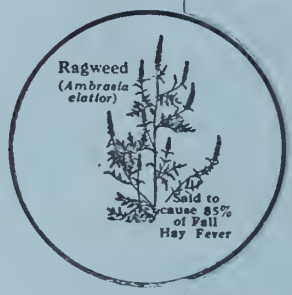
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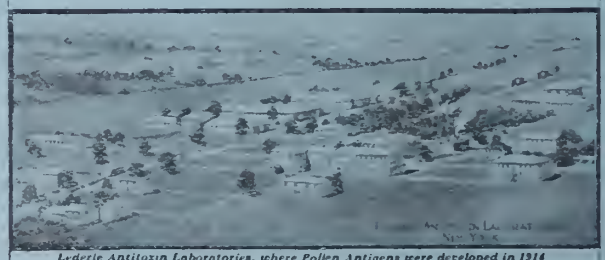
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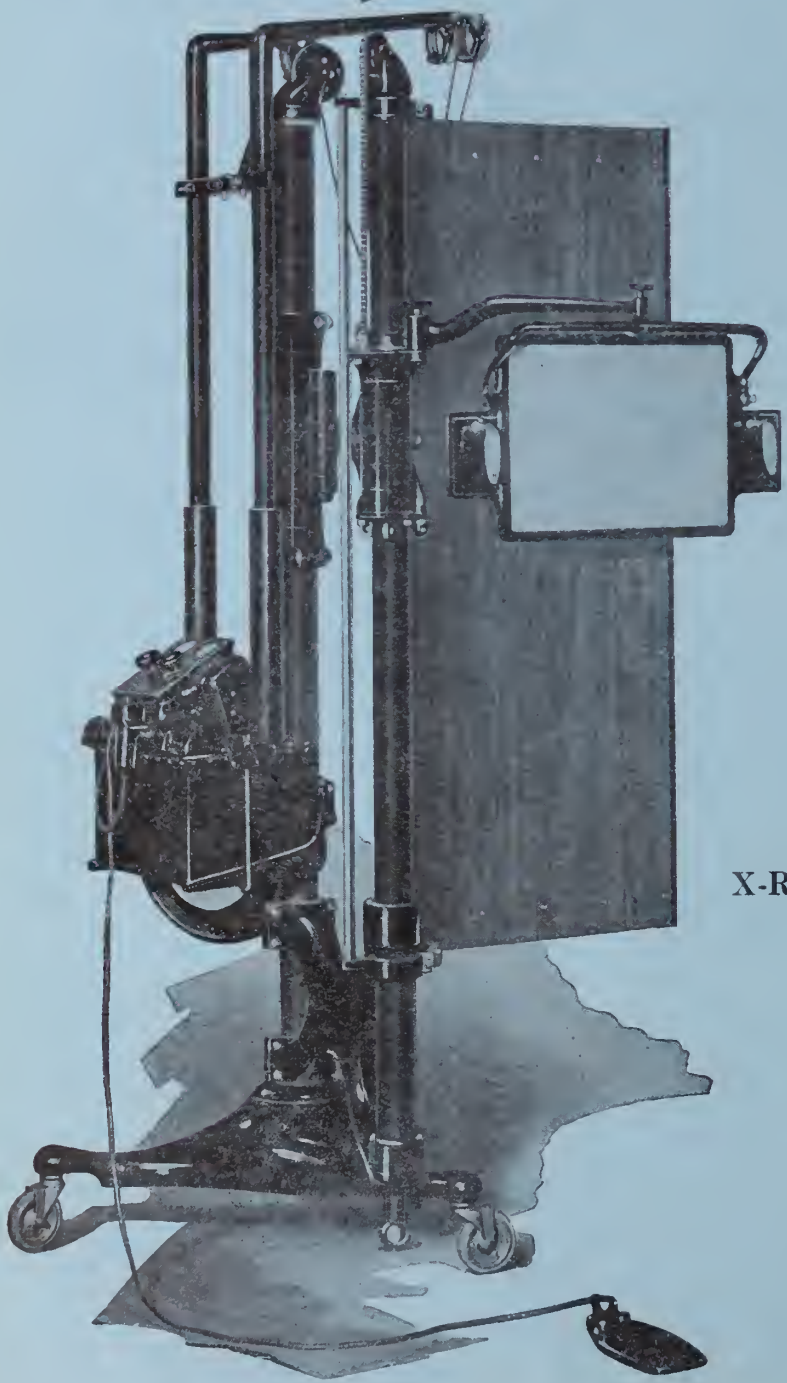
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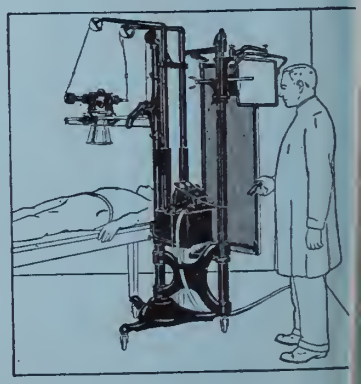
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MACULO-ANESTHETIC LEPROSY*

J. L. Kirby-Smith, M.D., Sc.D.,
Jacksonville.

Leprosy is a chronic infective granulomatous disease, produced by an acid-fast bacteria, the bacillus leprae of Hansen, and characterized by lesions of the skin, nerves and viscera. It terminates in local anesthesia, ulcerations, and a great variety of trophic lesions. After a long course it is almost invariably fatal. The history of leprosy dates back as far as that of man, but researches in medical history have brought out the fact that it is extremely probable that the word "leprosy," as Biblically employed, did not always refer to true leprosy, but to a generic term for all the various kinds of disfiguring skin diseases that were encountered. Lepers were so common in the middle ages that the rulers and clergy of nearly all European states, becoming alarmed at the rapid extension and terrible aspect of the disease, took measures to restrict the spread of leprosy by instituting leper asylums and enacting stringent laws for the segregation and isolation of those infected with the disease. By these active measures the epidemic gradually died out in the British Isles—the last indigenous leper dying in 1798.[1] In Italy, France, Spain, Germany and Russia the repressive measures were almost successful, although in these countries and the Greek islands an occasional case of indigenous origin is seen. Leprosy still lingers in Norway, where in places it is by no means uncommon, but even here, under strict segregation and comparative isolation, it is rapidly disappearing.

Apparently, leprosy was introduced into the New World in the days of the slave trade. We owe our modern knowledge of leprosy to Danielssen, Brock, Virchow and Vandyke Carter, while the discovery in 1874 by Hansen of the specific cause of leprosy, the bacillus leprae, has given a much-needed precision to our ideas on the subject of heredity and contagion and on the other practical points bearing upon the question of the leper as a source of public danger, upon his treatment, and management.

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

No matter what may have been the case formerly, at the present day, with unimportant exceptions, leprosy is a disease more particularly of tropical and subtropical countries. So generally is it diffused in these tropical regions that it would be easier to specify the countries in which leprosy has not been seen, than to enumerate those in which it has been ascertained to exist. Experience shows that the endemic area of leprosy enlarges as our knowledge of the natives of the uncivilized regions of the earth become more intimate. It may be safely concluded, therefore, with the exception of a few insignificant islands, that leprosy is an element, and often an important element, in the diseases of all warm countries.



Maculo-Anesthetic Leprosy.

In the distribution of leprosy in the United States, reference is made to the recent work of Hopkins and Denney,[2] from which I quote: "From certain areas in the United States, there have been a large number of admissions to the United States Marine Hospital for the treatment of leprosy, these native born. Admissions of natives of Louisiana, Florida, Texas and Mississippi have been in sufficient number during the last seven years to establish the fact that in these Gulf States the disease is endemic."

In the writer's twenty years' experience with dermatology in Florida, occasional cases of lep-

rosy have been seen, 25 in all, 22 being of indigenous origin. All of them gave a history of having resided for a time in the southern part of our State. Five were colored patients, three of these having resided in the West Indian Islands.



Maculo-Anesthetic Leprosy.
Middle of Back.



Maculo-Anesthetic Leprosy.

In the nodular, or tubercular type of cutaneous leprous lesions, the matter of the diagnosis presents very little difficulty, even to the medical man with little experience in this disease. Especially should this be true if the patient is known to have lived in a warm climate, with the existence of a disfiguring skin disease, which has no tendency to disappear, and with anesthesia present. These facts should be enough to warrant a laboratory examination for the bacillus leprae to confirm the diagnosis. In the macular type of leprosy the lesions are at times, especially at their beginning, confused with the lesions of ringworm, multiform erythema and pityriasis rosea. In most of the four maculo-anesthetic cases seen by the writer, in the white patients the ring-like lesions had been previously diagnosed and treated as ringworm or pityriasis rosea. In one of these patients a diagnosis of pityriasis rosea had been made by a prominent eastern dermatologist. This mistake, no doubt, was due to the fact that there was present a dermatitis, due to over-treatment. Anesthesia in the plague was not ascertained but, later, the recovery of the bacillus leprae from blood serum, obtained from a macular lesion, changed the aspect of the diagnosis.



Courtesy Dr. Geo. M. MacKee.
Maculo-Anesthetic Leprosy.



Courtesy Dr. Geo. M. MacKee.
Maculo-Anesthetic Leprosy.



Courtesy Dr. Geo. M. MacKee.
Maculo-Anesthetic Leprosy.

In one case the large macular plaque in the gluteal region had been treated for months by several medical men as ringworm disease. The lesions on the buttocks and back of another case suggested syphilis. In fact, this case had been diagnosed as syphilis, and treated accordingly, without any appreciable improvement. The famous John Early leprosy case, of Washington and New York, was admitted to the New York Skin and Cancer Hospital for observation, during the writer's term of house physician, 1908. This case, which obtained national notoriety, was the maculo-anesthetic type. Some of the lesions showed a marked dermatitis from irritating local treatments, and it was on this account that the controversal diagnosis developed. This case was definitely diagnosed as leprosy by the recovery of the bacillus leprae from an anesthetic macule on the forearm of the patient.

As previously mentioned, advanced cases of leprosy are readily recognized by those who have had any experience with the disease, but the incipient or atypical cases, on account of the lack of objective symptoms present, may present difficulties in making a clinical diagnosis.

The diseases which resemble leprosy, in addition to ringworm, pityriasis rosea and syphilis, are lupus vulgaris, mycosis fungoides, morphea and vitiligo. The nodules of syphilis are usually smaller, rounder and redder than those of leprosy. They are prone to a circular arrangement and run a more rapid course. Lupus vulgaris is apt to be more circumscribed in extent, the nodules being apple-jelly colored, very soft, and often set in scar tissue. Mycosis fungoides may in early stages, closely simulate leprosy, but, the patches show more inflammatory redness and are more eczematous in appearance, while later fungating ulcerating growths develop upon them. In maculo-anesthetic leprosy, the loss of sensation is a most important diagnostic symptom. This can easily be ascertained by a sharp instrument in any of the ring-like discolored patches, and will readily differentiate the disease from morphea, vitiligo and other pigmentations of the skin.

Among the many remedies that have been used in the treatment of leprosy, Chaulmoogra oil, or some of the derivatives of the oil have given most satisfactory results. A number of patients have been reported cured from these treatments, and, in nearly all cases of leprosy in which the remedy has been used in the early stages of the disease, a satisfactory improvement has been obtained from

Chaulmoogra oil. Various other treatments for leprosy have, at times, given promising results at first, but further use have proven less effective than Chaulmoogra oil.

At the 1928 annual meeting of the Section of Dermatology and Syphilology of the Southern Medical Meeting, held in Asheville, the writer called attention to a particular case of maculo-anesthetic leprosy. The treatment of this case consisted of intravenous injections of large doses of gold sodium thiosulphate, which resulted in a marked improvement. This patient received four intravenous injections of 100 millograms each of gold sodium thiosulphate during the course of two weeks' time. Before the treatment, the patient used her hand with difficulty. After these injections the trophic ulcers on the ends of her fingers, which had been present for six months, were completely healed. The discoloration in the palm of her hand was hardly noticeable, and no discomfort was felt from the use of her hands. The macular lesions in the middle of her back and the right buttock were noticeably improved. Unfortunately, this patient saw fit to discontinue treatment, and was seen only once more, this being three weeks after her last treatment. Nevertheless, this case exhibited enough improvement to warrant further use of the drug and on account of this it was decided to report the results. Major Oswald E. Denney, Medical Officer in charge of the United States Marine Hospital at Carville, Louisiana, in discussing my report, stated that gold salts had proven of no benefit in a number of patients treated at the Government Leprosarium. Hence, it is possible that my experience in the treatment of one case of leprosy is similar to results that have been obtained from the use of various other remedies that have been used in the past. These, at first,



Tropic Ulcers on Fingers and Pigmentation of Palm of Hand. Maculo-Anesthetic Leprosy.



Tubercular Type Leprosy.



Courtesy Dr. Geo. M. MacKee.

Maculo-Anesthetic Leprosy.

gave hopes of curative result, but on further trial proved to be only temporary and not permanently curative.

BIBLIOGRAPHY

1. Manson: Tropical Disease, 7th Edition, pp. 500.
2. Hopkins & Denney: Leprosy in the United States. Journal of the H. M. A., Vol. 92, No. 3.

DISCUSSION

Dr. Elmo D. French, Miami:

In the discussion of leprosy, one should stop to pay tribute to the memory of one of the foremost medical educators the South has yet produced, Dr. Isidore Dyer, former Dean of the Medical Department of Tulane University. It is due largely to Dr. Dyer's constant and untiring efforts that the American people owe the splendid instition at Carville, La.

To us in Florida I believe Dr. Kirby-Smith's paper is a timely warning. Florida will probably share greatly in the commercial intercourse which promises rapidly to develop between this country and the Latin-American countries, where leprosy is much more common than with us. Leprosy is quite protean in both its symptomatology and its physical signs. As Dr. Kirby-Smith stated, it often evades the most expert with no cause for just criticism. It is remarkable, however, that such a clinical syndrome as anesthetic macules or nodules associated with enlarged peripheral nerves, which association can mean nothing but leprosy, will often fail to arouse suspicion for months and sometimes years. I do not know that we are quite justified in assuming that leprosy is only mildly contagious. We know nothing, in fact, about the mode of transmission of the disease. We do not know the period of incubation in leprosy. The actual cultivation of the Hansen's bacillus is strongly disputed, and the disease has not been produced in animals, nor has a specific serological test been devised. Until these things are known, we should not assume too much. Cases of leprosy have been reported fifteen years after known contact with symptomatology no greater than a single lesion. The inability to inoculate animals with the virus of leprosy has greatly hampered therapeutic research. Remissions in the course of the disease are common and may be falsely ascribed to whatever mode of therapy is in use at the time.

I would like to call your attenton in Dr. Kirby-Smith's pictures, to how often these macular lesions occurred upon the buttocks. That is the seat of election, that is the favorite location of the macular lesions to appear in leprosy, and not an accidental occurrence.

Dr. C. A. Andrews, Tampa:

There is nothing that I wish to add to this paper of Dr. Kirby-Smith, but I wish to emphasize some of the points brought out by the essayist.

Since the anesthetic form of leprosy is the most common seen in the tropics and semitropics, Florida, as well as the States that border on the Gulf of Mexico, always has a few cases of leprosy and we should, therefore, be on the lookout for this type.

As Dr. Kirby-Smith has stated, the late cases are very easily recognized. It is the early case such as the macular type that one should be very careful in recognizing and in making an early diagnosis. Early diagnosis means the improvement of the individual, and if we may say "cure"(?), we might put that in question form, as the men in Carville who have discharged cases are still following them up.

Leprosy in its manifestation resembles in many ways syphilis, and therefore it was reasonable to

suppose that it results from inoculation. Various attempts have been made to discover the primary location of inoculation, but that has never been perfected. Possibly it will be proved later.

The bacillus leprae develops by preference in the skin and nerves. The ulnar, peripheral, saphenous and facial nerves are the most common. And I want to emphasize the slow and insidious onset. Sometimes it is not discovered for many years. Contagion, I believe, most authorities say, is minimum. The prognosis, as you know, when the case goes on with ulcerations, is always fatal.

Dr. J. Lee Kirby-Smith, Jacksonville (closing):

In conclusion, I wish to call your attention to the fact that on account of our semitropical climate, we in Florida are more liable to come in contact with leprosy than any other state in the Union. And, as Dr. Andrews stated, we should be on the lookout for the disease in unusual skin manifestations.

As to the contagiousness of leprosy: Who knows? It is a bacterial disease and is unquestionably communicable. Patients have had leprosy for years without knowing it and in their relationship with others may not have been the source of infection, yet they are a constant danger. The disease in its initial stage and in its early eruptions is quite difficult even for an expert to make a diagnosis. As mentioned in my paper, in the advanced stage with a well-developed eruption there should be no question about any of us recognizing it. Leprosy, as quite a number of other diseases, probably has its origin through the respiratory tract and the leper bacillus can usually be found from the nasal secretions in the ulcerations in the nose. In suspected cases, a microscopical examination should be made for the bacillus leprae.

WOODRUFF CATHETER TECHNIQUE IN MODERN CYSTOSCOPY AND URETERO-PYELOGRAPHY*

ROY J. HOLMES, M.D.,
and
MILTON M. COPLAN, M.D.,
Miami.

Modern urography has unquestionably replaced the once common exploratory operation upon the kidney which Fowler compared with Christian Science as being neither Christian nor scientific. With the advent of uretero-pyelography, the diagnosis of pathological conditions of the upper urinary tract at once assumed an aspect of precision and scientific exactness. Today, every experienced renal surgeon has encountered cases in which the prima facie evidence produced by pyelography represents the most important factor in the construction of a difficult diagnosis.

To reach the present state of perfection, pyelography has indeed been weighed in the balance. Urological literature, up to several years ago, was filled with condemnations of the procedure as being both harmful and dangerous. That the method survived is due in no small part to the brilliant defense of Braasch against great odds. As we view the subject years later, we strongly suspect that even he might have weakened in his defense of the method if other American urologists had not replaced collargol with the comparatively safe sodium iodide solution, and given us the gravity method of injecting the renal pelvis.

The dangers and distressing sequels of pyelography are so mild today when compared with those of a few years past, that we are inclined to believe that many of the older urologists regard them as of little consequence. To those of us who were not pioneers in the use of the method, reactions of pain of varying degrees of intensity, temperature, and general discomfort, are still sufficiently common to make our lives relatively uncomfortable. We have no fear that pyelography will become discredited or stigmatized as a dangerous procedure. The fact remains, however, that most of our patients throw up their hands in holy horror if another pyelogram is suggested. Physicians, generally speaking, hesitate, except in extreme cases, to subject their patients to a procedure which may produce pain out of all proportion to the amount of information gained. Urologists, with few exceptions, are inclined to regard pyelography as a distinct hospital procedure, and few of them have consciences which will permit them to leave their patient's beside without prescribing narcotics, if necessary, to control pain.

Having had, perhaps, more than our share of unpleasant experiences following pyelography, it occurred to us that our advocacy of a technique which has made more friends out of skeptic

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patients than any other one factor at our command, will be worthy of your consideration.

Dr. Stanley Woodruff, of the New York Post-Graduate Hospital, has recently published a new technique of uretero-pyelography, based on the use of a ureteral catheter which he has devised, and which, in our opinions, will do much toward overcoming the objectionable features referred to in the above paragraphs. We have used his method during the past year in 58 cases, of which only two required narcotics, or other medication to relieve pain. Both of these cases showed gross abnormalities which seriously interfered with drainage from the renal pelvis. We believe we can safely say that ninety per cent of our patients left our office immediately after the method was used, without complaining of discomfort. Many returned to their work or attended the movies after leaving the cystoscopic table. With few exceptions, all were agreeably surprised that they did not have any of the pain which their solicitous friends had warned them would inevitably follow.

It is well known that practically all pyelographic work at the present writing depends upon passing a catheter up the ureter and into the renal pelvis. If a ureterogram is to be made the catheter is usually withdrawn down the ureter at various levels, and the ureter injected. Why is this necessary? Is not the ureter itself an excellent natural catheter? Why pass a catheter within a catheter; a foreign body capable of producing ureterospasm, edema of the delicate ureteral mucous membrane, and also capable of carrying infection to parts not infected, simply to collect specimens from the kidneys, or to inject a few c.c. of contrast fluid?

Of course, we believe that there are certain very definite indications for ureteral instrumentation. We are dealing here with the average case coming to us for diagnosis.

The Woodruff catheter is 45 c.m. long, and has a caliber of No. 9 French. It is equipped with a filiform bougie which acts simply as a guide over which the catheter is carried to its position within the ureteral orifice. Instead of the usual lateral eye at the distal end the opening is straight flush and continuous with the lumen of the catheter. Near the distal end, the outside circumference funnels down so that when the catheter is inserted into the ureteral orifice, it enters as a wedge, and as the contrast substance is allowed to flow in by gravity, or is carefully injected, the opening being in a straight line connecting ureter and catheter, there is no tendency for the fluid to flow backward into the bladder.

As a preliminary to cystoscopy, we usually drain and instill one ounce of four per cent novocaine solution into the bladder. In placing the patient in position, the roentgenologist is given much more consideration than the cystoscopist; in other words, the patient is placed in the usual position for making a film of the urinary tract, and is not moved from this position until the work is finished. We prefer here to sacrifice cystoscopic technique and our personal convenience for the patient's comfort. When every preparation for making the film has been completed, the cystoscope is then passed and the ureteral orifice recognized. The catheter is then brought within the field of vision with the filiform bougie advanced about 1 c.m. beyond its end. After introducing the bougie very carefully into the ureteral orifice, its only further use is to act as a guide which directs the catheter into the orifice. When the catheter has been introduced one or two c.m. or as soon as it is seen to fit the ureteral orifice snugly, the filiform bougie is withdrawn. The ureter and kidney pelvis are then injected very slowly and carefully without taking the eye from the field of vision within the bladder. Immediately after the film is made, the solution is allowed to drain out through the catheter.

Some of the advantages of this catheter and this method of uretero-pyelography are as follows:

First: Following introduction of the catheter, urine usually begins to flow very promptly. It is not necessary to have the patient cough, take a deep breath, or in other ways encourage the flow of urine from the catheter. Urine is expelled in spurts at more or less regular intervals. Thus we are enabled to obtain valuable information regarding ureteral peristalsis. The act of collecting specimens from the kidneys may be simplified to not more than a simple bladder observation. The separate kidney function tests are more reliable as the occlusion catheter prevents leakage into the bladder. Thus all the phthalein eliminated by either kidney may be collected with accuracy.

Second: The wide lumen of the catheter and its flush connection with the ureter allows the contrast substance to flow in very rapidly by gravity. For the same reasons the fluid can be recovered, and the pelvis and ureter empties in

the minimum length of time. Pyelographic technique is greatly shortened, and the solution does not remain in the ureter and pelvis long enough to become irritating. Thus one of the common causes of discomfort is practically eliminated.

Third: Most of the reactions following pyelography are undoubtedly due to traumatism produced by the passage of the ureteral catheter. Some of our most violent reactions have followed mere passage of the catheter to the renal pelvis when nothing else was done. By filling the cavities from below by a catheter that is only inserted for the extremely short distance, as recommended, all traumatism is avoided, thus eliminating another cause of painful reactions.

Fourth: The danger of rupturing the renal pelvis or ureter by an occlusion catheter is practically nil when using the gravity method or careful injection, as the reservoir is held in the operator's hand at all times, and the slightest sign of pain or discomfort on the part of the patient is easily discernable, and is immediately overcome by lowering the pressure. The slightest obstruction to the passage of the fluid is also readily discernable. The sense of touch is so acute that on a number of occasions we have been able to "feel" ureteral peristalsis against the plunger of the syringe; an impossibility with the other type catheters.

Fifth: By no means the least utility of this catheter is the ease with which absolute aseptic catheterization of the kidneys is accomplished. There is no danger of carrying infection into the kidney pelvis. This eliminates another cause of severe reactions.

Sixth: This method has the great advantage of injecting the entire ureter and pelvis at the same time, and by preventing reflux into the bladder, fills all portions of both and allows better delineation than can possibly be obtained by any other means.

DISCUSSION

Dr. E. S. Gilmer, Tampa:

I think this paper of Dr. Holmes is very timely. Anything that will reduce or lessen the unpleasant reactions of pyelography, I think, should be welcome.

I have had two personal encounters with this procedure and can speak very feelingly on it. Dr. Woodruff's catheter, I think, is quite an addition to our equipment. Dr. Holmes went over most of the advantages of it, and one that I would like to emphasize is that it is large enough to fill the kidney by the gravity method, which I think is ideal. Heretofore, we have had to use small catheters which could not get the renal pelvis filled by the gravity method. With this procedure we can save our patients a lot of pain and reaction. Not having to introduce the catheter to the renal pelvis will be time-saving as well as economical since it will lessen the number of films used in each pyelogram.

There is one advantage that Dr. Holmes did not mention: that is, that in cases of irritable, inflamed bladders, sodium iodide is quite irritating to inflamed mucous membranes. If we can put this Woodruff catheter in and do a pyelogram without having reflux into the bladder, we are going to save our patients a good deal of discomfort. Every time we draw the catheter out, we get a regurgitation back to the bladder, and if there is any inflammatory condition there at all the patient suffers for it.

I must admit that when I first thought about this procedure I was rather skeptical, but since hearing this paper, and seeing more of it, I am becoming rather enthusiastic about it.

Dr. John E. Hall, Miami:

Dr. Holmes, as always, has given us a very excellent paper, and I am placed rather at a loss to discuss it, since I have never used the Woodruff technique, and therefore, shall have to confine my remarks to the technique current with cystoscopists in general.

Pyelography was instituted in 1906 by Voelcker and Lichtenberg, who attempted to outline pathological condition in the upper urinary tract. Naturally, their radio-opaque solutions did not conform to the requirements of today and their radiological findings were vague.

As Dr. Holmes has told you, many untoward results followed the injection of these solutions into the renal pelves, and it was considered an extremely dangerous procedure by many urologists, to inject both kidneys at one sitting. It was freely stated that nothing but the gravity method of injection was free from danger, and even this method of injection was followed by dire results.

In the light of our present day knowledge, this was due, in all probability, to the use of the fluids at that time employed, and to the lack of knowledge as to the capacity of the renal pelves.

Gradually, the syringe method of injection superseded the gravity method, and as solutions began to be employed which had no injurious effect, when introduced into the general circulation, dangers, arising from pyelography, have been reduced to a negligible quantity.

In the early days of pyelography, we were taught that the tip of the catheter must be introduced into the center of the renal pelvis, before injecting the solution, as this was supposed to render the procedure less painful. Of course, there was no way of knowing, before injection, just where the tip of the catheter was, and we usually passed it as high as it would go, which in most cases was the apex of the upper major calyx.

It was held that injection of the fluid, with the catheter tip below the pelvis of the kidney, caused dilatation of the ureter, with subsequent pain resembling renal colic. In this connection, I want to comment on what Dr. Holmes said about making ureterograms, and the drawing of the ureteral catheter down to various levels, and to ask him what his experience has been in the use of the Woodruff technique, where there has been any partial occlusion or obstruction in the upper third of the ureter. If the number nine catheter snugly fills the lower end of the ureter, and the fluid distends the portion between the catheter and the obstructed upper portion of the ureter, what about the pain? In such an assumed condition, the ureteral dilatation, or hydro-ureter, is above the obstruction in the upper part of the ureter, and the portion below the obstruction is not dilated. I can see where the Woodruff technique would be of advantage in conditions of hydroureters along their entire course, where ureteropyelograms were desired, since, as Dr. Holmes has told you, the catheter entirely fills the constricted portion of the lower end of the ureter, as it slants through the bladder, thus preventing regurgitation of the injected fluid into the bladder.

As to emptying the pelvis of the kidney following injection, the same thing may be done with the ordinary ureteral catheter, by aspirating it back through the needle and Luer syringe attached to the distal end of the catheter. By manipulating the catheter and withdrawing it by degrees down to the uretero-pelvic junction, all of the fluid may be aspirated back, except that filling the lower calyx.

I do not think that the passage of the ureteral catheter under ordinary care and gentleness has any tendency to produce trauma to the mucosa lining the ureter. Naturally, if the ureter be kinked or constricted, and undue force were exerted, trauma might result, but the same thing would apply under like conditions, if the fluid were forcibly injected through the constricted area, as the resultant dilatation from the fluid would cause trauma to the delicate mucous membrane.

The use of the Woodruff catheter should be of distinct value in making phthalin tests, since, as Dr. Holmes has stated, it entirely fills the lumen of the ureter near the bladder orifice, thereby insuring the collection of all the urine excreted.

Dr. Roy J. Holmes, Miami (closing):

In answering Dr. Hall's question we have several very excellent ways of ascertaining if the ureter is occluded. One is to note the spurt of urine from the catheter and the intervals between these spurts. Another is that we can usually feel an obstruction against the plunger of the syringe. If either of these methods suggest an obstruction, it is a simple matter to substitute one of the older type catheters. I wish to thank the men for the very liberal discussion, and again express by indebtedness to Dr. Woodruff.

UNDULANT FEVER

Report of Case Traced to a Cow

L. Minor Blackford, M.D.,
Atlanta,
and
T. Z. Cason, M.D.,
Jacksonville.

Dr. Paul K. Jenkins, of Miami Beach,[1] has recently reported the first case of undulant fever to be diagnosed in the State of Florida. Dr. G. M. McCoy, Director of the Hygienic Laboratory, U. S. Public Health Service, Washington, D. C., knows of but one other case to date,[2] which is the subject of this report. In other parts of the country the diagnosis has been made more often. Hardy[3] has pointed out the frequency with which it has been made in Iowa following successive case reports in the State Medical Journal. The diagnosis is rare in Europe except in the Mediterranean countries.[4]

Malta fever has been a clinical entity from time immemorial. In 1886, Bruce (quoted by Wahl and Erickson[5]) isolated the etiologic or-

ganism, *B. Melitensis*. In the last quarter century it has been shown that *B. Abortus* (*Bang*) causes abortions in cattle, and may be conveyed to man through milk. There is also a porcine type. *B. Melitensis* and *B. Abortus* are indistinguishable by cultural or agglutinating tests, though they may be distinguished by more elaborate procedures. Both cause a long continued illness with protracted intermittent pyrexia, to which the name "undulant fever" has been attached.

Hardy,[3] in a study of 125 cases, found weakness and easy tiring the first symptom in 74; these were the only symptoms invariably present. In order of their occurrence, others were sweating (97), "feverishness" (93), chilliness (92), loss of weight (89), anorexia (86), headache (71), constipation (64), and, in less than half, general aching, insomnia, backache, arthralgia, rigors, abdominal pain, nausea, cough, pain in back of neck, vomiting and sore throat. Moderate secondary anemia with leukopenia and a further relative decrease in polymorphonuclears (less than 60 per cent) is frequent. Irregular fever is the rule. The diagnosis can only be made definitely by the high specificity of the patient's serum in agglutinating the organisms. The average patient was confined to bed five or six weeks, but the average duration of the illness was four months; four of the 125 died after a short course of sustained high fever.

The most important thing in treatment is naturally prevention; if it is not possible to eliminate all infected cows, universal pasteurization is to be advocated. The use of vaccine has been recommended, but reports of its efficacy vary.[5] Habs[4] treated four cases with salvarsan, and was satisfied with prompt subsidence of fever and symptoms in three of them. Intravenous administration of numerous other drugs has been tried with varying results.[5] It would appear to us, in view of the erratic course of the disease, the tendency to spontaneous recovery, and conflicting reports of success with various modes of therapy, that the most rational treatment should consist of general supportive measures, with relief of symptoms as they appear.

Case Report.

A highly neurotic "gentleman-farmer" of Duval County, aged 40, was admitted to the Riverside Hospital, Jacksonville, April 15, 1929, on account of fever. At about the age of 20 years he had been suspected of being tuberculous, and was under the observation of a specialist for several weeks with a final negative diagnosis. For many years, associated with worry and nervousness, he had suffered from digestive disturbances somewhat suggestive of peptic ulcer. In December, 1927, his gastro-intestinal tract had been thoroughly studied at the Riverside Hospital without finding evidence of organic disease. In November, 1928, he had a fever for twelve days that was attributed to "flu."

About April 1, 1929, following some weeks of unusual work and worry, he became sick with fever, weakness and generalized aching. The pains largely disappeared but the fever and weakness persisted. From long practice he was an expert aerophage, and he required a daily enema while in the hospital. There were no localizing symptoms. Physical examination was essentially negative. Temperature was usually normal in the morning and about 102 in the afternoon; pulse never exceeded 100. Repeated urinalyses revealed little. No tubercle bacilli could be demonstrated in sputum, urine or stool. On the 18th, hemoglobin was 80 per cent, the leukocytes numbered 5,100, and the percentages in the differential count were polymorphonuclears 46, lymphocytes 46, large mononuclears 4, transitionals 6 and basophils 1. Blood smears were searched repeatedly for malarial organisms without success. The Wassermann, several blood cultures and four Widal tests were negative. Cerebrospinal fluid was equally negative in every way. Roentgen examination of teeth, sinuses, kidneys, gall bladder, stomach and colon were negative. Stereoscopic plates of the chest showed a slight increase in density around the hila. These data, especially in view of the suspicion of tuberculosis twenty years earlier, made us fear the patient was suffering from miliary tuberculosis. Finally an intradermal tuberculin test was resorted to, but it too proved negative.

April 29, detailed physical examination was made again. The patient looked well, he was not emaciated and his color was good. The pharynx was somewhat injected. There was no evidence of adenopathy or splenic enlargement. The heart was not enlarged, and no adventitious sounds were heard. The lungs were clear. In brief, the entire examination gave essentially normal results. Since the commoner causes of protracted

fever had been virtually excluded, undulant fever was considered. The patient had two cows on his little farm; he was of the opinion that one of these had aborted several times. Upon securing this information, a tentative diagnosis of undulant fever was made.

Dr. T. F. Sellars, of the Georgia State Board of Health, reported complete agglutination in the patient's serum with both *B. Melitensis* and *B. Abortus* in dilutions of 1:640. Dr. George F. Klugh, of Atlanta, saw agglutination with *B. Melitensis* (*B. Abortus* not tested) at 1:1280, and the Hygienic Laboratory in Washington reported agglutination with both organisms at 1:1280.

When the diagnosis was made definite, the patient was allowed to go home with instructions to pasteurize all milk so that other members of his household might not be exposed to infection. Two weeks later he went to the mountains of Virginia, where he has been convalescing uneventfully; for more than two weeks (June 27th) he has been free from symptoms. His directions were to carry on normally, eat plenty of food, secure adequate rest, take aspirin for aches and pains and—*not* to take his temperature.

The blood of both cows has been tested at the Gainesville laboratory and in Washington, and both institutions have reported strongly positive agglutination with *B. Abortus* in the serum from Cow A. We have advised the destruction of this cow.

Summary.

The second case of undulant fever in Florida is reported. This case is of particular interest because, after obtaining a history of abortions in one of the patient's cows, a tentative diagnosis was made. Positive agglutination in high titer was reported on both the man's serum and that of the cow. The etiologic organism in this instance is evidently *B. Abortus* and not *B. Melitensis*.

REFERENCES.

1. Jenkins, P. R.: Brucella Abortus infection. Jour. Am. Med. Assn., 92, 1593-1594, 1929.

2. Personal communication.

3. Hardy, A. V.: Undulant fever. Jour. Am. Med. Assn., 92, 853-860, 1929.

4. Habs, Horst: Bact. abortus Bang als Erreger septischer Erkrangungen beim Menschen, Zeitschr. f. klin. Med. 108, 445-462, 1928.

5. Wahl, E. F., and Erickson, M. J.: Human infection with bacillus abortus (undulant fever). Bull. J. D. Archbold Mem. Hosp., 3, No. 8, 1928. This paper gives an excellent historical account and other information of value.

VACCINE AND SERUM THERAPY IN PEDIATRICS*

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When it comes to the use of serums and vaccines in the prevention and treatment of diseases of children, we are confronted by so many so-called specific biologic agents that it is well to take account of stock, and separate the sound from the unscientific. This necessitates theoretical considerations, experimental data, as well as accurate observations in daily practice.

Consider alphabetically the infectious diseases encountered along the east coast of Florida from the above viewpoint:

1. *Common Colds.*—Theoretically, we cannot expect to devise any rational plan for biological control of these upper respiratory infections, because we do not know to what a common cold is due. The micro-organisms may be normal inhabitants, or they may be the cause of secondary invasion of tissues, or its products. Pneumococci may produce a transitory immunity, and combined vaccines may produce a specific immunity for the individual strains injected. Yet clinical experience seems to show that when there is no pathology, such vaccines may either prevent colds in persons chronically susceptible, or at least mitigate their effects. They are apparently harmless, and are worth further trial and more careful study.

2. *Diphtheria.*—To determine susceptibility, to produce active immunity, and for treatment, we possess a full complement of reliable biologic agents. The Schick test, with strict technic and with proper material, kept fresh and cold, has less than 2% technical error. The present one-tenth L plus mixture of toxin-antitoxin gave few reactions in the 455 children we just immunized at the Coral Gables Elementary School. Of the total attendance this represented 70% who consented to take immunization. Dosage exactly 1 c.c. subcutaneously, followed always by Schick test in six months, the result varies with the immunizing strength of the particular preparation, and the diphtheria history of the community. The per cent of Schick negatives has been disappointing in some places this past year, but better preparations are now available. However, as diphtheria decreases it may be increasingly difficult to immunize susceptibles.

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The modified toxin, e. g., Ramon's anatoxine or toxoid as a substitute for toxin-antitoxin, possesses high immunizing value, but because of the reactions is limited to children, particularly below seven. With improvements they will supplant toxin-antitoxin mixtures.

Although anaphylactic reaction may result from toxin-antitoxin, followed later by injection of horse serum or antitoxin, the condition is rarely serious. The substitution of goat antitoxin is open to question. Toxoid would be better.

Diphtheria antitoxin is still the most notable of antitoxins. Improvements in the method of concentration give a product of greater and more lasting potency and clarity and a reduced content of non-antitoxic serum proteins. The present-day preparations make possible high unit dosage in small volume with decrease in number and severity of cases of serum sickness. The rule of subcutaneous injections for prophylaxis, intramuscular for mild and moderately severe cases, with intramuscular and intravenous injections in severe cases, still holds, and the curative effect will depend upon administration at the earliest possible moment, in sufficient amount. With the increased concentration and therefore decreased volume of present-day preparations, the full doses recommended by manufacturers should always be given. In this connection, be it emphasized that the examination of a sick child is never complete without a look at the throat, and cultures should be taken in all cases of angina.

3. *Encephalitis Lethargica.*—No specific biologic agent for prevention or treatment and no convalescent serum. Rosenow's streptococcus immune serum has not been confirmed by others.

4. *Erysipelas.*—Hemolytic streptococci are intimately associated with this type of infection. This organism, or group of organisms, like their near relatives, the scarlatinal streptococci, produces a toxin, and against this toxin an antitoxin has been obtained and concentrated which apparently has therapeutic value, especially if given before the fourth day, and is to be recommended in cases of this kind. In 10 c.c. doses, erythema, edema, temperature and toxemia diminish. Being an antitoxic serum, its effects are mainly against the existing toxemia, but does not confer an immunity against subsequent infection or recurrence. The close relationship between erysipelas and scarlet fever streptococci suggests the cross neutralization of the two toxins by the two antitoxins. Experimental and clinical tests substantiate this. If erysipelas antitoxin is not available, scarlet fever streptococcus antitoxin is worth trial.

5. *Infantile Paralysis.*—The cause of anterior poliomyelitis has not been isolated, but the situation is promising because the disease can be transferred to monkeys, thus opening the way for a study of the virus, the disease process it elicits, as well as a means for measuring the preventive or curative action of biologic or other agents. Monkeys can be immunized by vaccination, but by a method not practical as yet for children. Laboratory and clinical experience show that convalescent serum has neutralizing properties for the virus, and exerts an inhibitive and curative action on the infection when given in sufficient amounts early. Theoretically, the shorter the time between recovery and the drawing of the blood, the more potent should be the protective power of the serum, yet blood taken years after convalescence may still have curative power. The serum is separated from the clot as usual, and tested for sterility. While dosage is arbitrary, yet the custom is to inject intraspinally 15 to 20 c.c., and about double that intravenously. Rosenow's and other serums have been found by some investigators to have little or no protective or neutralizing action on the virus.

6. *Influenza.*—Baffles immuniologist and bacteriologist even more than it does the physician. Pfeiffer bacillus and the Dialister pneumosintes are believed to be the cause, yet cause for neither has been proved. Consequently, a specific biologic agent cannot possibly be developed to prevent or to cure influenza. Bacterial vaccines, containing Pfeiffer bacillus alone or combined with other bacteria associated with respiratory infections, have been tried and are still extensively used. Influenza being primarily an intoxication, it is unreasonable to suppose that injections of killed bacteria would produce any antitoxic immunity, and they undoubtedly do not. Apparently there is little scientific basis for including the Pfeiffer bacillus in such vaccines. Such other organisms as are included in these "influenza" vaccines may possibly raise the level of immunity to secondary invaders and thereby reduce the incidence and severity of these secondary infections, but the same comments as made on vaccines for colds apply equally here.

7. *Measles.*—Always underrated, so never studied until twelve years ago. Tunnicliff isolated a green, anaerobic diplococcus, or strepto-

coccus, from the blood of measles patients in 1917. In 1918 four observers in France and United States successfully used convalescent serum in exposed children. Taken from the blood and throat early in the disease, the diplococcus yields an extracellular toxic substance, when used like the Schick and Dick tests produces skin reactions in almost every person who has never had measles. This toxic, or reacting substance, is neutralized by measles convalescent serum. The serum of goats immunized with this organism not only neutralizes this toxin but also prevents or modifies the disease in persons exposed. Tunnicliff and White obtained a similar serum from a horse, but it is too early to pass on its value. Sheep serum is also in the experimental stage. Dr. Stowe, pathologist at the Jackson Memorial Hospital, and I have been using convalescent serum not to prevent measles altogether but to so modify it that no harmful effect occurs, and the patient is allowed to have a mild attack of a few hours' duration so as to develop an active and presumably lasting immunity. If blood cannot be obtained soon after convalescence, then we must be satisfied with a positive history of measles. Donor's freedom from communicable diseases, and sterility of serum are important. Six to ten c.c. given intramuscularly within four or five days after exposure usually prevents; when given later, a mild attack occurs, free from dangerous complications, followed by a lasting active immunity.

8. *Meningitis.* — In epidemic cerebro-spinal meningitis, or meningococcus meningitis, the antimeningococcic serum has markedly reduced the mortality and the subsequent physical damage. Indicated in every meningococcus case, and in many even before definite bacteriologic diagnoses. Is a polyvalent serum. It should be given subdurally at the earliest possible moment. Amount injected into spinal canal should be slightly smaller than the spinal fluid withdrawn, and should be injected slowly under gravity pressure—not by syringe. In severe and obstinate cases the serum is injected into the ventricles, and in infants, to avoid hydrocephalus, should alternate first few days with intraspinal. Ayer recommends the cisterna magna route, especially in children, as being comparatively free from danger. Intravenous injection is of value theoretically only in early stages. As time goes by, different strains are being introduced from foreign countries, and maybe a type not covered by the usual serums. So in every case the organism should be isolated and cultivated, so if patient fails to respond, by simple agglutination tests, another lot, or make of serum, may have a higher antibody content for the strain involved. Even now some of the atypical strains are being added to the other standard strains employed for the production of antimeningococcic serum. So, careful bacteriologic and serologic control is necessary.

There is no specific serum for the treatment of meningitis due to other bacteria. Pneumococcus may be excepted, but even here we should expect no pronounced improvement following the exhibition of antipneumococcus serum, but the desperate character of such cases justifies the use of this serum, or of pneumococcus antibody solution.

9. *Pneumonia.*—Recent investigations show that the injection of killed pneumococci into the animal body is followed by a surprisingly rapid development of active immunity to pneumococcus of the type injected. Not only do animals so injected resist what would be fatal injections of pneumococci, but their serum protects experimental animals against injections of many times the number of pneumococci that would kill normal animals. The immunity produced appears to be strictly type specific; it develops a few days after injection of the pneumococci, rapidly disappears, and is absent at end of two months. So quick immunity against particular type, and of short duration, characterizes this resistance to infection.

Views on serum treatment of pneumonia are contradictory. Anti-pneumococcic serum of Type 1, of a potency equal to the government standard, given in a sufficient dose, early in the disease, often favorably influences the infection. In pneumonia patients, receiving intravenous injections of this serum, we know that there is a temporary and sometimes a permanent sterilization of the blood when a bacteriemia exists, there is often a sharp change for the better in the general condition, and recovery may take place with accelerated crisis. Theoretically, such serum might have even a harmful effect if the infection is massive, or of more than three or four days' duration, and this prediction is borne out in practice.

Immune serum, containing agglutinins and protective antibodies, particularly against Type I and to lesser degree against Type II, has limitations because of low content of antibodies. The Felton pneumococcus antibody solution contains

protective substances against the first three types of pneumococcus, nearly free from accompanying serum proteins; given intravenously early in the disease lessens the fatality, especially with bacteriemia. Its action best in Type I, less so in Type II, and least so, or even harmful in infections due to Type III organisms. So the Felton antibody solution is worthy of trial in cases of lobar pneumonia due to Type I and Type II infections, if given early.

In bronchopneumonia, a course of injections of mixed "cold" or "influenza" vaccines may, clinicians say, ward off or lessen an attack. Difficult to see why, but if at all possible, being harmless, their use is justifiable.

Unfortunately we have no serums that influence the course of the bronchopneumonias once they are established.

10. *Rabies.*—Increasingly serious in some states. Two questions are: Can dogs be protected by vaccination? And which form of vaccine treatment should be given to persons bitten by, or otherwise possibly infected by rabid dogs?

Dogs vaccinated with a vaccine of killed rabies virus are not always resistant to street virus, nor do we know how long such immunity persists. Some evidently protected, some not. One single prophylactic dose for a dog is contents of 5-c.c. vial.

But in the case of human beings bitten by or suffering less violent contact with rabid animals, treatment with rabies vaccine will practically always prevent the disease, and early treatment has reduced mortality from 20 to 0.5 per cent. Of all the five vaccines used, there is a growing tendency to employ those preparations containing the killed virus like that of Semple, on account of occasional paralysis from living virus. The fourteen-day treatment is usually sufficient where infection from contact is feared, or where the bite is trifling, but in other cases it is safer to increase to twenty-one days. Comes in packages of seven two-c.c. syringe containers.

11. *Rheumatic Fever Problem.*—Not definitely solved. Small and Birkhaug's recent publications on a particular coccus, toxin, and immune serum, not convincing. Not certain that "Streptococcus cardio-arthritidis" is the cause of rheumatic fever. We must suspend judgment.

12. *Scarlet Fever.*—The recent development of biologic means for the prevention and treatment of scarlet fever deserves lengthier discussion than can be granted here. It now appears to be established that hemolytic streptococci of a special biologic group are responsible for the various morbid manifestations classed as scarlet fever. These cocci, under suitable cultural conditions, yield a soluble substance which produces a local reaction when injected into the skin of persons with a negative history, and no reaction in the skin of those giving a positive history of scarlatinal infection. This same toxic substance in large doses produces all but the septic symptoms of scarlet fever and in smaller, properly gauged amount, produces immunity to this disease. Both these streptococci and their metabolic products can be used to immunize horses, and their serum used either directly or in concentrated form, appears to be a valuable remedy for this disease. The use of this toxin in the Dick test gives in the main trustworthy indication of susceptibility or immunity, but in individual cases there occur reactions, usually false negatives, which do not correctly indicate the true immune status of the individual. Simultaneous tests performed on a considerable number of persons with toxins from different strains of scarlatinal streptococci, give like results in the majority of persons, but sometimes individuals show a definitely positive reaction to one toxin and a negative reaction to a toxin of another strain. This finding would explain the occurrence of negative reactions to the Dick tests in patients in the early stages of scarlet fever, and the development of typical scarlet fever in persons previously giving a negative reaction to the test. The accuracy of the test would probably be increased by using a preparation of the combined toxins of several authentic strains of scarlatinal streptococci, and it is quite likely that by increasing the amount injected into the skin from one to two skin-test doses the occurrence of false negatives would be prevented.

The use of this toxin for actively immunizing susceptible persons against scarlet fever is likewise generally successful, but here again persons so treated and giving a negative Dick test have come down with a characteristic attack of the disease. The comment made in regard to the Dick test applies equally in this connection, and a polyvalent toxin would seem to be a better means for bringing about an immune condition. The present practice of giving a series of five injections of toxin with the preliminary and subsequent Dick tests, while evidently resulting in a higher percentage of immunes, is time-consum-

ing, and expensive from the patient's standpoint.

In some susceptible persons the initial immunizing dose of toxin may cause a systemic scarlatinoid reaction, the severity depending upon the dosage. In order to obviate such reactions, a toxin modified by sodium ricinoleate has been devised and advocated by Larson. One dose, containing roughly 3000 skin-test doses of toxin, is given, and systemic reactions are unusual. Reports of the efficacy of this agent are not in agreement, and cases are known where two injections one week apart have failed to protect against the disease.

Scarlet fever streptococcus antitoxin is now an accepted remedy for scarlet fever. Given a potent preparation, administered in sufficient amount early in the disease, the curative effect is gratifying, not only in its rapidity but in its completeness. Chemical studies have resulted in a refinement of the product and in a more reliable and conservative estimate of its potency. Volume for volume well aged batches of the concentrated antitoxin now cause little, if any more, serum sickness than concentrated diphtheria antitoxin. Being an antitoxic and not an antibacterial serum, its action is against the intoxication of the disease and not the septic complications. Inasmuch as septic sequelae are more likely to develop in a body depressed by a toxemia, one would expect that the complications of this disease would be fewer where the antitoxin is administered early. The expectation is fulfilled in practice. The antitoxin, for the best results, should therefore be given as soon as the diagnosis can be made. The dose is from ten to fifteen cubic centimeters of the present standard preparations for mild cases, or cases of moderate severity in children, with twice or three times the amount in older persons, or in more grave cases. The injections should be made intramuscularly, and in the more virulent cases some of the antitoxin may be given intravenously.

The prophylactic use of this antitoxin, except under certain circumstances, is not advisable. The number of exposed persons who eventually develop the disease is small, the protection afforded by the serum is brief, while the source of infection may continue to be present or new sources occur, resulting in infections after the passive immunity has worn off. Subsequently, injections of antitoxin are then far more likely to cause a severe attack of serum-sickness.

Where those persons who have suffered exposure to scarlatinal infection can not be seen regularly, or frequently, it may be desirable to give a prophylactic injection of five or more cubic centimeters of the antitoxin, but in all other instances it is better to examine contacts daily and at first symptoms suggestive of scarlet fever, to give a therapeutic dose of the antitoxin. In this way unnecessary sensitization to horse serum is avoided, and any attack of the fever can be stopped before it has a chance to develop.

13. *Smallpox.*—This vaccine contains the living virus of vaccinia or cowpox, standardized and refined, free from all harmful bacteria. Being a living virus, it requires careful handling, should be a fresh lot, kept constantly in an ice-cold place. This gives a maximum of "takes." Strict attention to method in leaflet is necessary. Older methods of cross-hatching, incision, and linear scarification should be abandoned, and the simple, painless and wholly satisfactory technic of multiple pressure be used instead, giving minimum discomfort. Single, or multiple, puncture may produce undesirable results. Intradermic injection holds dangerous possibilities.

Multiple pressure method requires no dressings. Shields are an abomination, and should not be manufactured at all; tight bandages should not be applied. The arm is preferable. If untoward reaction occurs, if vesicle or postule are injured, or if scab comes off prematurely, paint with tinc. of iodine, or 4 per cent alcoholic solution of picric acid; after 48 hours this does not interfere with immunity. Vaccinoid or accelerated takes, and immune reactions, merit attention in revaccinations; observe 3rd, 4th and 8th day. Ideal is to vaccinate babies during first year and again just before entering school. Epidemics and exposure call for revaccination. The testicular vaccine of Noguchi and the neuro-vaccine of Savaditis possess no advantages over calf vaccine.

14. *Tetanus.*—Infections few among whites in Florida. Firearms, fireworks and dirt require consideration; here tetanus antitoxin usually averts. Available, refined, and concentrated. Prophylactic dose usually 1500 units, given at once after injury, and repeated with each surgical interference.

In treatment, the antitoxin should be given intraspinally immediately, and frequently thereafter, using as large doses as can be conveniently injected, diluted if necessary. Additional amounts

may be given intravenously and in the nerve sheaths, but intraspinal most efficacious.

Ramon's toxoid, made from tetanus toxin, induces active immunity to tetanus. Useful in protecting troops in warfare, and in protecting susceptible domestic animals. Its use after a wound or infection would be futile.

15. *Tuberculosis.*—In tuberculosis we have several tuberculins for diagnosis and treatment, and now much attention centers about the new prophylactic vaccine of Calmette—"B. C. G." The tuberculin of choice for diagnosis is the "Old Tuberculin" or "O. T." This product is standardized for method of manufacture and sterility, but not for potency. This is unfortunate because the physician may not know what the strength of a preparation is, or, as a matter of fact, if it has any strength at all. Before using "O. T." inquiry should be made if the product has been tested and what its strength is as compared to preparations of known activity. For treatment, the "Old Tuberculin," the "Bouillon Filtrate," or "B. F.," comprise all the necessary tuberculins. Ophthalmologists show a preference for "T. R." But it probably has no superiority over "B. F." for their purpose. One should always bear in mind that tuberculin may be a dangerous agent and no liberties should be taken with the prescribed dosage, save by those who are thoroughly familiar with its action.

Calmette, Guerin and others have announced that in "B. C. G." they possess a vaccine that is harmless, yet when given to young non-tuberculous animals and children, causes an active immunity to be established against tuberculous infection. This vaccine is composed of tubercle bacilli made avirulent by successive culture in a bile-containing medium. It is given by mouth to infants in the first few days of life. Sometimes the vaccine is administered subcutaneously. The history of the infants and animals so far treated and later exposed to tuberculous infection is at first reading impressive, so impressive that extensive experiments on children and bovine creatures are being carried out in this and foreign countries. Any final judgment, however, must be withheld until tests have been multiplied and continued over a period of years.

For the cure of tuberculous affections the "Sanocrysin" treatment has come out of Denmark where among some observers it has found favor. The treatment consists of the injection of a gold salt along with an anti-tuberculous serum. The treatment has been investigated at the United States Hygienic Laboratory and the results have discouraged its use. It can be safely said that outside of the tuberculins we have no specific biologic agent of value in the treatment of infections due to the tubercle bacillus.

16. *Typhoid Fever.*—There is little new to be said about typhoid vaccine, and as yet there is no specific serum or other biologic agent for therapy. Since the two types of paratyphoid infections have become prevalent in this country, it is customary to include bacilli of the A and B types in the so-called "triple vaccine," containing also typhoid bacilli. Since 1921 all the vaccine of this kind that has been distributed by the Department of Public Health has been made according to the numerical standard current in the United States Army and Navy and in commercial laboratories. In addition, since 1924, the bacilli have been washed. This step has reduced the number of systemic reactions without diminishing the immunizing effect. In immunizing adults it appears to be the better practice to inject this vaccine in divided doses, giving 0.2 then 0.5 c.c., followed by two injections of 1 and 1 c.c., all at weekly intervals.

Besredka, believing that we should immunize the particular tissue vulnerable to typhoid or paratyphoid infection, has, after much experimental work, proposed giving typhoid vaccine by mouth. A preliminary dose of bile is administered for the purpose of exposing the tissue cells of the intestinal mucosa, particularly those of Peyer's patches, to the action of the vaccine. He has practiced the method on groups of French troops and civilians, and although his figures seem significant, so far as freedom from typhoid infections are concerned, his method is little used in this country.

The injection of typhoid and other vaccines, as well as milk and various proteins, in the treatment of typhoid and allied fevers, still remains in the realm of empiricism, and further information must come from clinical studies.

17. *Whooping Cough.*—The value of bacterial vaccines for the prevention and treatment of whooping cough is a moot question. They are of two kinds, namely: the simple vaccine containing only the Bordet-Gengou bacillus and the combined.

Further consideration of pertussis will be considered in the résumé to make a more complete reference sheet.

The list of serums, vaccines and other biologic products is long; the number of infections, acute and chronic, for which to find prevention, alleviation, or cure, is large. For some we stand on sound scientific basis with specific biologic agents; for others we have slight theoretical and clinical evidence, and for others little or no justification for their use.

In closing I wish to acknowledge my indebtedness to Kolmer and to Thomas and Ivy for the facts on immunology; and to Dr. Benjamin White's up-to-date critical review of serums and vaccines in the prevention and treatment of infectious diseases, as read before our Section on Pediatrics at our annual meeting of the Massachusetts Medical Society last year, at my home-city of Worcester. From Dr. White I have copied freely.

Also to "Recent Advances in Diseases of Children," by Pearson and Wyllie of London, 1928; Abt's Pediatrics, 1928; Fantus' General Therapeutics, 1928; Section on Diseases of Children A. M. A., 1928; Parke, Davis and Company's Therapeutic Notes, 1928; and to many individual writers whose opinions I have here set forth.

RESUME

1. *Common Colds:*

Biological control not rational, because theoretically, etiological specific micro-organisms unknown. Yet, clinically, combined vaccines may produce a specific immunity for the strain injected, are harmless, and are worth further trial or study.

2. *Diphtheria:*

A full complement of reliable biologic agents to determine susceptibility, to produce active immunity and for treatment. The Schick test has less than 2% technical error; to determine susceptibles it is given subcuticularly on the forearm.

To prevent, the present one-tenth L. plus mixture of toxin-antitoxin is given every five to seven days for three doses. Dosage exactly 1 c.c. subcu., followed always by Schick test in six months.

The modified toxin, e.g. Ramon's anatoxine, or toxoid, as a substitute for toxin-antitoxin, possesses high immunizing value, and is taking its place.

Diphtheria antitoxin, still the most notable of all antitoxins, is injected subcutaneously for prophylaxis, intramuscularly for mild and moderately severe cases with intramuscular and intravenous injections in severe cases. Inject at earliest possible moment in sufficient amount.

3. *Encephalitis Lethargica:*

No specific for prevention or cure and no convalescent serum.

4. *Erysipelas:*

Hemolytic streptococci, like their near relatives, the scarlatinal streptococci, produces a toxin, and against this a concentrated antitoxin of therapeutic value has been obtained. It is recommended to fight the toxemia, but does not prevent recurrence.

5. *Infantile Paralysis:*

In anterior poliomyelitis, cause is not isolated; but disease can be transferred to monkeys, who can be immunized by vaccination; not practical yet for children. Laboratory and clinical experience show that convalescent serum has neutralizing properties for the virus; it inhibits, or cures, given in sufficient amounts early, particularly if withdrawn recently.

Dose is arbitrary; custom is to inject 15 to 20 c.c. intraspinally, and about twice that, intravenously.

6. *Influenza:*

Baffles immunologist, bacteriologist, and clinician. Case for Pfeiffer bacillus and the Dialister pneumosintes not proved yet, so no specific biologic agent to prevent or cure. Same comments as applied to colds.

7. *Measles:*

Underrated. Tunnicliff isolated a green anaerobic diplococcus or streptococcus from blood of measles patients in 1917. In 1918 convalescent serum used successfully in exposed children. The diplococcus, taken from blood and throat early, yields an extra-cellular toxic substance producing skin reactions like Schick and Dick tests. This reacting substance is neutralized by measles convalescent serum. Greatest titre six to ten days after fever is down. In ages one to three years, in first four days after exposure give 5 c.c. to prevent; and for adult 25 c.c. of serum (or 75 c.c. blood) intramuscularly. If given in five to seven days after exposure use 10 c.c. of serum for child of one to three years and 30 to 40 c.c. for adult (75 to 100 c.c. of blood for adult). For three years up, from first to fourth day, use 10 c.c. Protection is probably from three weeks to one month. To limit measles to moderate attack, lasting possibly only a few hours, use one-third to one-half the protective dose.

One authority gives a child 6 to 10 c.c. intramuscularly four or five days after exposure, to prevent; when given later, a mild attack occurs, free from dangerous complications, followed by a lasting active immunity.

8. *Meningitis:*

In epidemic cerebro-spinal meningitis, or meningococcus meningitis, the antimeningococcic serum has reduced the mortality and physical damage. Indicated even before bacteriologic diagnosis. Give this polyvalent serum subdurally early, in amount smaller than fluid withdrawn by lumbar puncture. Inject slowly under gravity pressure, not by syringe. If severe or obstinate, inject into ventricles. Cisterna magna route not dangerous. Intravenous injection of value theoretically only in early stages. Isolate and cultivate organism, so if patient fails to respond, another lot may have a higher antibody content. There is no specific serum for meningitis due to other organisms.

9. *Pneumonia:*

The injection of killed pneumococci gives rapid immunity to type injected, so that once fatal doses of pneumococci can be safely injected; also the serum from these animals protect other animals likewise. This immunity is type specific and of short duration.

Views on serum treatment of pneumonia are contradictory. Antipneumococcic serum of type I, of a potency equal to government standard given in sufficient dose, early in disease, often favorably influences the infection. Intravenous injections sterilize blood if there is bacteriemia, and patient improves, or recovers, with accelerated crisis. Harmful if infection is massive, or of more than three or four days' duration. Immune serum has limitations.

The Felton pneumococcus antibody solution contains protective substances against the first three types of pneumococcus in lobar pneumonia; given intravenously, early in disease, it lessens fatalities, especially with bacteriemia.

No prevention for broncho-pneumonia unless in "cold" or "influenza" vaccines. No curative serum.

10. *Rabies:*

Dogs vaccinated are not always resistant to street virus. One single dose is contents of 5-c.c. vial.

In human beings, bitten by rabid animals, treatment with rabies vaccine will practically always prevent the disease. The fourteen-day treatment is usually sufficient for feared contact or trifling bite; but in other cases it is safer to increase to twenty-one days. Comes in packages of seven 2-c.c. syringe containers.

11. *Rheumatic Fever:*

Not definitely solved. We must suspend judgment.

12. *Scarlet Fever:*

Its morbid manifestations due to hemolytic streptococci of a special biologic group; these streptococci yield a soluble substance which produces a local reaction when injected under the skin of persons with a negative history, and no reaction when there is a positive history of scarlatinal infection. This toxic substance produces all but the septic symptoms of scarlet fever and in smaller properly gauged amounts produces immunity to the disease. Both these streptococci and their metabolic products can be used to immunize horses, and their serum used directly or in concentrated form, appears to be a valuable remedy for this disease. The use of this toxin in the Dick test gives in the main a trustworthy indication of susceptibility or immunity.

One immunizing dose of toxin, modified by sodium ricinoleate and devised by Larson, contains 3,000 skin-test doses and systemic reactions are unusual. Reports on it not in agreement, and even two injections have failed to protect.

Scarlet fever streptococcus antitoxin is now an accepted remedy for scarlet fever. Given a potent preparation, administered early in sufficient amounts, and the curative effect is gratifying in its quickness and completeness. Is antitoxic and not antibactericidal, so works against intoxication and not the septic complications, but latter are few if it is used. Dose is 10 to 15 c.c. if mild or moderately severe in children, with twice or thrice as much in older persons, or in grave cases; it is given intramuscularly, or if virulent, intravenously.

Prophylactic use of antitoxin not advisable, but examine contacts daily and on first symptoms inject a therapeutic dose of the antitoxin, thus avoiding unnecessary sensitization to horse serum and yet stopping the attack.

13. *Smallpox:*

Variola vaccine contains the living virus of vaccinia, or cowpox, free from all harmful bacteria. Keep fresh and cold for maximum takes. Multiple pressure method best with no dressings. Vaccinate babies during first year, and again just

before entering school. Epidemics and exposure call for revaccination.

14. *Tetanus:*

Prophylactic dose usually 1,500 units, given hypodermically at once after injury and repeated with each surgical interference. In treatment, the antitoxin should be given intraspinally at once and frequently thereafter, using as large doses as can be conveniently injected, diluted if necessary. Additional amounts may be given intravenously and in the nerve sheaths, but intraspinal is most efficacious.

Ramon's toxoid induces active immunity. Valuable in protecting troops in warfare, and susceptible domestic animals.

15. *Tuberculosis:*

Several tuberculins for diagnosis and treatment, and now much attention centers about the new prophylactic vaccine of Calmette—"B. C. G."

"Old Tuberculin," or "O. T.," is the tuberculin of choice for diagnosis; it is standardized for method of manufacture and sterility, but not for potency, so inquire if it has been tested and of what strength it is.

For treatment, the "Old Tuberculin," the "Bouillon Filtrate" ("B. F.") of Denys and the "Bacillus Emulsion" ("B. E.") comprise all the necessary tuberculins.

Tuberculins may be a dangerous agent, so take no liberty with dosage.

Calmette, Guerin, et al, have announced that in "B. C. G." they possess a harmless vaccine, which, when given to young non-tuberculous animals and children, causes an active immunity to be established against tuberculous infection. Is given by mouth to infants in the first few days of life, or sometimes subcutaneously. Results impressive.

For the cure of tuberculous affections the "Sanocrysin" treatment has come out of Denmark; it consists of the injection of a gold salt along with an anti-tuberculous serum. U. S. Hygienic Lab. investigation discourages its use. Safe to say that outside of the tuberculins we have no specific biologic agent of value in the treatment of infections due to the tubercle bacillus.

16. *Typhoid Fever:*

Little new about typhoid vaccine, and no specific serum for therapy.

"Triple vaccine" (including the two types of paratyphoid infection) is of U. S. Army and Navy standard. In immunizing adults, best given in divided doses, giving 0.2, 0.5, 1 and 1 c.c. at weekly intervals.

17. *Whooping Cough:*

The value of bacterial vaccines for the prevention and treatment of pertussis is a moot question, because the Bordet-Gengou bacillus has never been positively proven and has poor antigenic properties at best. However, the Danish reports are favorable, as is also that of the Harvard Whooping Cough Commission, though proper controls were not used.

Although pertussis vaccines rank low in the list of biologic agents, most pediatricians use them, because after years of clinical trial, they feel that of all treatments, although far from satisfactory, it is the best we have, reducing the severity of attacks and the eventual duration. Best of all, they eliminate complications and sequelae such as pneumonia, emphysema, asthma, tuberculosis, strabismus, dilated hearts and hernia. Finally, the writer of this article read the annual paper in 1923 before the pediatric section of the Massachusetts Medical Society, choosing for his subject "The Treatment of Whooping Cough." In this paper he stated that he had lost children from the effects of whooping cough from 1900 to 1916, but from 1916 to 1923, in four thousand cases treated (31 in one "four-decker" tenement alone), he had not a single death. This holds good today (1929). Considering that there are 10,000 children, particularly babies, dying every year from the effects of pertussis, the above facts are worthy of consideration. Babies respond quickly to the vaccine.

It is important that the stock vaccine, or immunogen, be kept cold and fresh, both for prevention and treatment. Like applying water to a house afire, the sooner used, after exposure, the better.

Prophylactic: 8 to 12 billion per c.c., using 1 c.c. every other day for three injections, prevents in at least 80%. Repeat on possible exposure in successive years, as time of immunity is unknown. To new-born, give ½c.c. at once, and ½ to ¾ c.c. to three or four weeks old. Influenza germ plays a secondary part. Curative: First dose, 1 c.c. (under six months, frail or convalescent, less) every other day until cough, cyanosis and restlessness reduces; four or five doses, total; but no limit to number.

Ultra-violet is safer to use than X-ray, because although latter kills the germs, it also atrophies glands and thus may be dangerous. The vaccine, however, is harmless.

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THE NEWLY CREATED SPECIALTY: AVIATION MEDICINE

Three hundred million dollars annually is said to be the expenditure upon the development of air ports in the United States. It is said that the initial cost of constructing a railway is $1.00 per inch. The cost of constructing a well-established and well-equipped air line is one-tenth as expensive as railway construction. A landing field every ten miles throughout the United States will occupy only 3% as much land as is occupied by all American railways. It is interesting to note that of air line activities 90% of the work is carried out on the ground and only 10% in the air.

Every individual who has, as a part of his duties, the responsibility of operating air craft for commercial purposes is required to subject himself to annual and semi-annual physical examination. Even private pilots, this group composed of those who fly largely for pleasure, are required

likewise to subject themselves to annual physical examination.

There has developed, therefore, a special activity which has acquired the title "Aviation Medicine". Specially trained physicians, designated by the United States Department of Commerce, Aeronautic Branch, are those who carry out the professional examinations. The applicant for pilot's license has no choice in the matter of selecting a physician except as relates to presenting himself to a physician designated as qualified to conduct the examination by proper governmental authority.

The examination is not particularly difficult so far as the technical aspects are concerned. The examining physician is required to have a fair practical working knowledge particularly of eye, ear, nose, and throat, heart and blood vessels, and nervous and mental diseases. Many of the examining physicians have been trained in the United States Army School of Aviation Medicine. Others have trained themselves in pursuit of their general medical studies.

The aviation medical man occupies a very definite position as a specialist in that a number of the large air-craft corporations have employed physicians to examine their pilots at frequent intervals independently of the official examination required by the Government. Thus, the air line corporations are adding an additional safety factor.

It has been advocated that medical colleges pay special attention to training physicians to conduct aviation medical examinations as it is believed that the flying population will steadily increase.

From research work of flight surgeons, particularly of the Army, has come interesting scientific knowledge as to the factors of altitude and anoxemia. Cardiac response to exercise under conditions of rarified atmosphere and otherwise has been carefully and profitably studied. Some of the developments have been found useful in the treatment of the general group of patients in every-day walks of life.

Aviation medicine is truly a newly created specialty. Its work is of tremendous importance. It is believed perhaps that the lessons learned from subjecting aeroplane pilots in interstate commerce transportation activities to rigid examinations will probably indicate the wisdom of subjecting others in charge of all kinds of rapid transportation facilities to the same medical safeguards.

"Aviation Medicine", by Dr. Louis K. Bauer, formerly commanding officer of the army school of aviation medicine, now medical director for the aeronautics branch of the United States Department of Commerce, is a reliable treatise upon the subject. This work can be read with profit by physicians generally.

STATE NEWS ITEMS

Dr. Maurice H. Tallman of Coconut Grove is recovering from a three months' illness due to complications following a fractured spine which he sustained in an automobile accident on the 9th of June, 1929. Dr. Tallman had been home only three days from a trip through the West Indies and northern South America when the accident occurred.

* * *

Dr. Lawrence Simcox of St. Petersburg has been working on the summer staff of the Clifton Springs Sanatorium, Clifton Springs, N. Y.

* * *

The next examination of the American Board of Otolaryngology will be held October 21st in Philadelphia preceding the opening of the meeting of the American Academy of Ophthalmology and Otolaryngology in Atlantic City. Prospective candidates for certificates should address the Secretary, Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, Nebr., for proper application blanks.

* * *

Dr. and Mrs. Jos. H. Lucinian of Miami left recently for Baltimore and New York for a month's vacation. During this time, Dr. Lucinian expects to attend the annual meeting of the American Roentgen Ray Society to be held in New York City.

* * *

The many friends of Dr. Robert B. McIver of Jacksonville will be interested to learn of his marriage to Miss Ida Arwyn Holmes of Jacksonville on September 4th.

* * *

The pharmacy of J. K. Attwood, Jacksonville, has recently been moved from the corner of Riverside Avenue and Forrest St. to the new Wade Building, 1022 Park St.

* * *

Dr. L. W. Cunningham has returned to his office after a serious illness and is greeting his old friends once again.

Dr. Mary Freeman of Perrine has gone north for a vacation.

* * *

Dr. Don Fraser has recently returned to Panama City after an absence of several weeks.

* * *

Dr. and Mrs. J. D. Coupland recently returned to Eustis after spending several months in the north.

* * *

Dr. C. P. Bullard and family of Miami recently returned from a visit to Chattanooga and Atlanta.

* * *

Dr. W. S. Hancock, formerly of Brooksville, announces the removal of his office to New Port Richey.

* * *

Dr. H. A. Walker of Hollywood was recently injured in an automobile accident.

* * *

The many friends of Dr. and Mrs. Wm. Hughlett of Cocoa will be grieved to learn of the death of their young son, who died as a result of a fall which occurred at Leopoldville, Belgian Congo, while they were en route to their destination in Africa. Dr. and Mrs. Hughlett are doing missionary work in Africa.

* * *

Dr. J. A. Davis of Orlando recently returned from a trip to Atlanta where he vacationed with friends and visited clinics.

* * *

The Volusia County Medical Society is already contemplating a full attendance at the meeting of the Southern Medical Association convention to be held in Miami this fall.

* * *

The Pasco-Hernando-Citrus County Medical Society held its August meeting at New Port Richey. The members of the society were the guests of Dr. W. S. Hancock. Those present were: Drs. T. F. Jackson, J. T. Bradshaw, Geo. A. Dame, J. F. Miller, G. R. Creekmore and W. S. Hancock.

* * *

The next meeting of the Inter-State Post-Graduate Association of North America will be held at Detroit, Michigan, August 21 to 25, inclusive. The program is replete with interesting papers by physicians of national and international reputation.

* * *

Dr. H. A. Johnson and family of Palatka are visiting near Atlanta.

Dr. Homer L. Pearson of Miami announces the removal of his office from 610 Huntington Bldg. to The Gowdy Clinic, 120 Shoreland Arcade. Practice limited to obstetrics and gynecology.

* * *

Dr. L. A. Baker of Miami is attending Dr. John B. Deaver's Clinic at Philadelphia. He also expects to visit Johns Hopkins before returning to Florida.

* * *

Dr. Julius C. Davis of Quincy has been elected to Fellowship in the American College of Surgeons and will receive his Fellowship at Chicago in October.

* * *

ALBERT CRONIN IVES

Dr. Albert Cronin Ives was born in Lake City, Florida, April 2, 1874, and received his preliminary education in that city. He attended Emory University and graduated with the class of 1902. Dr. Ives came to Tampa in 1904 and with the exception of two years' service in the Marine Hospital at Cardinas, Cuba, practiced in Tampa up to the time of his death, August 3, 1929. For the past five years he specialized in X-ray work. Dr. Ives was a Mason, a Shriner, member of the Hillsboro County Medical Society, the Florida Medical Association and the American Medical Association. He is survived by his widow, the former Miss Fannie Van Sant of Lake City, and three children.

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Park Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	91%
Bay	J. M. Whitfield, M.D., Panama City.					64%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		71%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	65%
Columbia	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	68%
DeSoto-Hardee-Highlands	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	93%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	86%
Escambia	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	71%
Hamilton	R. A. Barnett, M.D., White Springs.					100%
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	76%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	53%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	93%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	82%
Leon-Gadsden-Liberty-Wakulla-Jefferson	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	71%
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	95%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	100%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	83%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	90%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	96%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	72%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	75%
St. Johns	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	64%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	85%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		83%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	60%
Suwannee	W. C. White, M.D., Live Oak.					86%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	92%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-Holmes	W. C. Harper, M.D., Chipley.					100%

NOTE—Secretaries: Please submit information to complete the above schedule.

Dr. Lloyd J. Netto of West Palm Beach recently presented an interesting paper before the Palm Beach County Medical Society on "Sympathetic System in Relation to Abdominal Pain."

* * *

Dr. Thomas S. Adams of Jacksonville has been assigned to active service for the period of one month in the United States Navy, stationed at Key West.

* * *

Dr. D. L. Carter of Ft. Lauderdale and Miss Madeleine Corwin, of Newburgh, New York, were recently married.

* * *

Dr. W. B. Winkler of Ft. Myers was recently appointed city physician of that city.

* * *

Dr. Ralph N. Greene of Jacksonville was recently guest of honor at the Suwanee River Medical Society and read a paper on "Mental Diseases Pertaining to General Practice." The meeting was held at the Suwannee Hotel, Live Oak.

* * *

Dr. Elmo D. French of Miami recently returned from attending clinics in New York and Rochester, Minnesota.

* * *

Dr. Clayton D. Washburn of Jacksonville recently returned from New York and Washington where he attended clinics.

* * *

The following members of the Columbia County Medical Society attended military training camps during the summer season: Lt. Col. A. E. Rogers at Ft. Oglethorpe, Major L. J. Arnold at Ft. Barrancas and Capt. T. H. Bates at Ft. McPherson.

* * *

Dr. B. L. White and family of St. Petersburg recently returned from a motor trip to New York and Atlantic City. While in New York Dr. White attended clinics at the Polyclinic and New York Post-Graduate School and Hospital.

* * *

Dr. W. Wallace Hardman, formerly of Titusville, has opened an office in the First National Bank Building, Elberton, Ga. He recently returned from twelve months' post-graduate work in Atlanta and New York City.

* * *

Dr. H. J. Coll, formerly of St. Petersburg, announces the opening of offices in the First National Bank Building, Connellsville, Pa.

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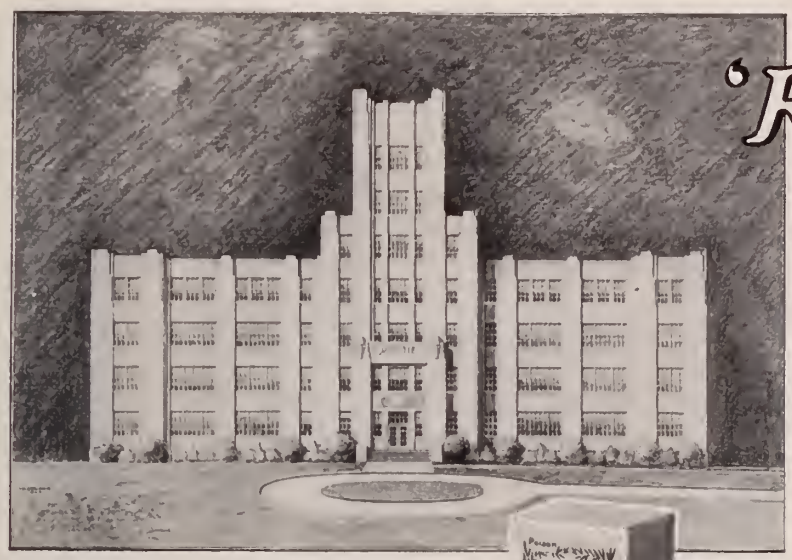
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NUTLEY NEW JERSEY

Dr. W. S. Miller and family of Palatka are visiting in New York for a few weeks.

* * *

Dr. and Mrs. Homer L. Pearson of Miami announce the birth of a son, August 12th.

* * *

Dr. and Mrs. G. M. Lochner of St. Petersburg recently returned from a month's vacation in Mountain Home, North Carolina.

* * *

Dr. John T. Hosey and family of Palatka are visiting in Mississippi. They expect to return about October 1st.

* * *

Dr. W. C. Young, after completing his internship at the Municipal Hospital, Tampa, has opened an office at Starke. Dr. Young will do general practice.

* * *

Dr. Robert B. McIver of Jacksonville recently presented a surgical paper, by invitation, before the meeting of the First District Medical Society of Georgia at Savannah.

* * *

Dr. L. W. Glatzau of DeLand has returned from a motor trip to Los Angeles, Calif., where he attended the Shrine convention. He stopped at many cities and medical clinics in the western cities.

* * *

Dr. W. J. Baker, formerly of Eastport, is now located at Foley, Florida, near Perry. He is in charge of the hospital department of the Brooks-Scanlon Corporation.

* * *

Dr. John S. Helms, Jr., has opened offices at 812 Citizens Bank Building, Tampa. Dr. Helms, in addition to general practice, will be associated with his father as surgical assistant.

* * *

Dr. Richard M. Klussman and family of Ft. Lauderdale left in August for an extended trip throughout the north. Dr. Klussman, while away, will attend surgical clinics in eastern cities. He will also visit the Mayo clinic in Rochester, Minn., and expects to return to Florida about the first of November.

* * *

Dr. and Mrs. T. W. Hutson of Miami announce the birth of a daughter.

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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

ONE of the oldest "laboratory" tests, known even to the ancients, consisted of noting whether a patient's sputum floated or sank in a pail of water. Medieval physicians struggled heroically to interpret the meaning of physical and chemical changes of bodily secre-



tions. Laboratory tests are today more trustworthy and precise, yet we are frequently warned not to rely too complacently on the laboratory findings for a diagnosis. At the other extreme is the tendency to neglect laboratory tests altogether. The presence of tubercle bacilli in the sputum clinches the diagnosis; yet, all too often, this simple procedure is neglected or not repeated often enough. Dr. Henry Stuart Willis, of Johns Hopkins Hospital, who contributes this number, describes the characteristics of the secretions of the tuberculous body and the tests which are applicable to them.

SPUTUM, PLEURAL EFFUSION AND SPECIAL FLUIDS

The secretions of the tuberculous body vary according to the site of the disease and its degree of development. Sputum, for instance, may be very scanty in amount and mucoid in character in one stage of the disease, and very abundant, purulent, bloody or foul at other stages. Pleural effusion fluids may be serous or bloody; they may contain but few cells or may be frankly and grossly empyematous. Urine may contain pus or blood or both. Cerebrospinal fluid may be clear and limpid or turbid. None of the secretions has properties that are specific for tuberculosis but

(*Continued on page* 138)



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See Description, Journal A. M. A. Volume XLVII, Page 1488

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most of them do possess characteristics which strongly suggest tuberculosis.

SPUTUM

Sputum may differ in quantity and quality in different stages of pulmonary tuberculosis. A small, nonulcerative lesion that is moderately well invested with fibrous tissue will produce but little mucous, fibrin, debris, or pus cells, as compared with the ulcerative or cavitative lesion. Yet, it does have certain general features of importance. It is often thick, tenacious, yellow, or grayish-yellow, mucopurulent or purulent. The specimen frequently consists of a thin, salivary liquid in which the mucopurulent "gobs" are suspended: these sink to the bottom as rounded, "nummular" bodies. Interspersed throughout the more homogeneous, thick matrix of these bodies may frequently be found numerous minute, whitish, opaque particles, and these are much more likely to contain tubercle bacilli than other portions of the specimen. They are more readily detectable when the specimen is placed in a petri dish or on a glass plate and examined over a black background. They may be brought to view by squeezing the specimen between glass plates.

The sputum may be bloody. Blood may be present in large quantity or it may be represented merely as an occasional "streak." Blood in the sputum, regardless of the amount, is a leading indication of tuberculosis and justifies a presumption that tuberculosis is the cause, until a definite cause is demonstrated. The physician in charge of the hemoptoic patient, must, therefore, determine the source of the blood if this be possible. Bloody sputum should always be carefully examined for tubercle bacilli, although when the amount of blood is large, the number of bacilli is usually proportionately small.

Tubercle bacilli are nearly always, sooner or later, demonstrable in pus which comes from the tuberculous lung. The continued presence of such sputum, in which repeated examinations fail to reveal these bacteria, is presumptive evidence against tuberculosis and points rather to some other pulmonary disease (abscess, bronchiectasis, mycotic infection, etc.).

The sputum raised soon after the patient gets up in the morning usually contains more bacilli than specimens obtained at other times. It may become necessary for the doctor to supervise the collection, especially in people with only a slight cough and but little sputum.

(*Continued on page* 140)

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The most significant constituents of the sputum in tuberculosis are tubercle bacilli. In the late stages, these are exceedingly numerous and easy to find, but in early stages when the diagnosis is uncertain, very few tubercle bacilli may be present and only intermittently so. Therefore, frequent, careful examinations, repeated daily for some time, should be made. The old Ziehl-Neelsen staining technique is simple, relatively quickly carried out, and thoroughly dependable.

PLEURAL EFFUSION

Pleurisy with effusion is regarded as being tuberculous until some other etiological factor can be definitely demonstrated. The fluid is viscid and usually of a straw or amber color but may be sanguinous or empyematous. It is an exudate fairly rich in lymphocytes and of rather high specific gravity. It is obtained by ordinary thoracentesis. It must be differentiated particularly from the fluid which occurs in the chest in cardiac disease and from that in pulmonary neoplasm. The fluid in cardiac disease is nearly always thinner, of lower specific gravity and cellular content than that in tuberculosis. It is associated with cardiac disease, is often bilateral, and tends to recur. The fluid in association with tumor tends to be sanguinous; if not bloody at the first aspiration, it is very likely to become so on repeated tappings. It tends to recur. The clinical history and examination, together with the continued absence of tubercle bacilli in the fluid, point away from the diagnosis of tuberculosis.

The fluid in pleurisy with effusion must either be examined promptly upon withdrawal or an anti-coagulant must be added. Painstaking microscopic examination of the sediment of fairly large amounts of the fluid in pleurisy will yield tubercle bacilli in more than one-half of the cases. The incidence is much higher when the fluid is empyematous. Indeed, the fluid in tuberculous empyema sometimes contains myriads of tubercle bacilli, especially if rupture of a cavity well has taken place. It is well to centrifugalize several hundred cubic centimeters of the fluid, remove the sediment, and recentrifugalize it for microscopic examination, animal inoculation or planting on culture.

CEREBROSPINAL FLUID

In tuberculous meningitis, the fluid is generally limpid, clear, and under slightly increased pressure, although in fulminant cases it may be turbid. The cell count is generally above 100 cells per

(*Continued on page* 142)

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cubic mm. and may reach several hundred without the appearance of a grossly detectable opalescence. A few hours after withdrawal, there nearly always develops within the fluid a characteristic (but not pathognomonic) grayish-white, thin, filmy veil which is composed of strands of fibrin that form a delicate network. In the meshes of this structure is gathered most of the particulate matter of the specimen—cells, tubercle bacilli, etc. This pellicle is, therefore, of importance in the search for tubercle bacilli. It may be prepared for stain very easily, as follows: A clean coverslip containing a thin film of fixative is placed in the bottom of a clean medicine glass. The fluid is then collected directly into this container, which is placed in the ice box for a few hours or over night. The pellicle is deposited on the coverslip, which is recovered after a very careful removal of the fluid with a pipette. The coverslip is then allowed to dry, is fixed by passage through a low flame, stained and examined. Cerebrospinal fluid may be centrifugalized and the sediment inoculated on media or into animals.

URINE

Tuberculosis of the genitourinary system is uncommon without evidence of the disease in some other part of the body. Frequency of urination, intermittent hematuria or pyuria or unexplained polyuria (especially in renal tuberculosis) suggest a careful search of the urine for tubercle bacilli. Urine containing pus in which microorganisms of disease are absent is a leading sign of renal tuberculosis because in nearly every other disease which causes pyuria the causative bacteria are easily detected. However, the detection of other bacteria in such urine does not eliminate tuberculosis, for secondary invaders are not uncommon. Sterile pyuria may occur in posterior urethritis.

Tubercle bacilli may be present in the urine in enormous numbers although sometimes very few are detectable. They may be conveyed by the hands to the urine from the patient's sputum and thus lead to a false diagnosis. Bacilluria is frequently intermittent. For microscopic study, either a specimen obtained after scrupulous cleansing of the external meatus and irrigation of the external urethra with sterile water or the sediment of a 24-hour specimen should be used. Smegma bacilli inhabit the external genitalia and may lead to an erroneous diagnosis unless this be guarded against.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)

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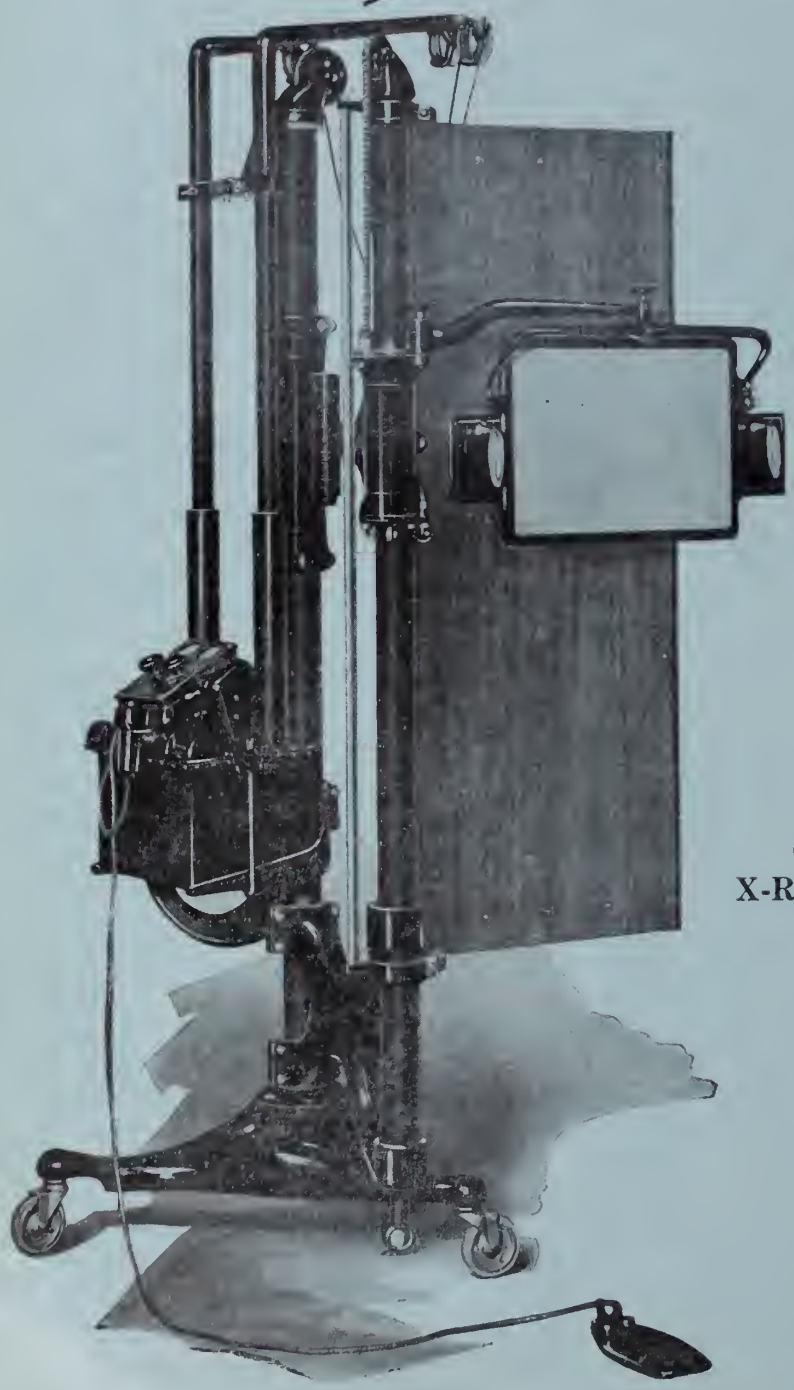
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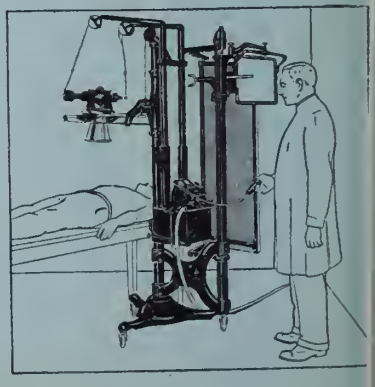
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PYELOVENOUS BACKFLOW*

LOUIS ORR, M.D.,
Orlando.

At the annual convention of the American Medical Association in San Francisco, in 1923, there was exhibited a most interesting phenomenon of the kidney. This exhibit, which was awarded the gold medal of the Association, was a demonstration of the passage of material from the pelvis of the kidney into the renal veins with subsequent diffusion throughout the general circulation. This reflux of material was noticed under varying degrees of back pressure and, to this interesting occurrence, was applied the term, "pyelovenous backflow."

Probably to Hinman and Lee Brown,[1] is due almost full credit for the observation and description of the condition. But, as early as 1856, Gignon[2]—using KI and starch—demonstrated the passage of fluid by way of the venous plexus on the surface of the calyces from the pelvis in both the human and cadaver kidneys.

Hinman[3] first noticed the occurrence of pyelovenous backflow when carrying out the routine injection procedures relative to a study of the renal circulation. When collodion was injected into the pelvis of a kidney during injection studies on the renal arteries and veins, it was found that an extravasation of the injection material into the substance of the kidney was produced by the slightest elevation of the injection pressure. After digestion of the specimens in hydrochloric acid and acetone, it was often noted that the venous system of the kidney was completely injected. At first it was thought that the passage of the material up the veins was due to a rupture in the pelvic wall but, after sectioning and careful microscopic examination, no rupture could be demonstrated. And, what was more remarkable, the cast of the venous circulation produced in this manner was very similar to the one produced by the direct injecton of the renal vein.

This backflow was described as following a very definite route, confined to the veins, in the nature of an ascending drainage of the pelvic sure of the kidney. Once the backflow is established, contents under conditions of back pressure, usually at a pressure lower than the secretory pres-

lower pressure than the initial one will cause its continuation. These writers have further enlarged upon the description of the phenomenon by citing possible anatomic similarities that might exist between the structure of the kidney pelvis and the venous openings and the structural basis of the drainage of the contents of the anterior chamber of the eye. The vitreous humor, secreted by the ciliary body, has an almost direct outflow into the venous system of the sclera under certain conditions of back pressure.

The site of occurrence of pyelovenous backflow was stated to be at the points where the pelvis is reflected off onto the tip of the minor calyces and that the backflow is initiated by a widening of this very acute angulation causing an opening to be produced in the large superficial venules which lie directly adjacent to the calyces.

For the first experiments, Hinman and Lee Brown used the fresh kidneys of sheep, rabbits and dogs. By using manometric control it was found that the lower limits of pressure producing backflow were found to be about uniform and that the completeness with which the venous system became engorged with the injected material was proportionate to the degree of pressure exerted. But, it was also found that if a low degree of pressure—or that pressure just sufficient to initiate pyelovenous backflow—was kept in force for a sufficient length of time, as complete a venous injection would take place as would under a condition of high intrapelvic pressure. It was further observed by the experimenters, when injecting the material into the pelvis of the kidney, that the plunger of the syringe seemed to become less resistant at the moment the backflow began.

To further substantiate the occurrence of backflow, the writers used full grown adult sheep in experiments. The sheep were anesthetized with gas and oxygen and the ureters exposed and connected by cannulas with a manometer intervening. A solution of phenolsulphonepthalein was injected into one pelvis at a given pressure. After a short time, a greater ease of injection became

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

noticeable. The phenolsulphonepthalein, shortly thereafter, began to appear in the urine from the other kidney.

With these experimental facts in hand, the possibility of the relation of backflow to the mechanism of hydronephrosis was to be considered as hydronephrotic atrophy has been said to be as vague in pathology as renal structure is in anatomy. Certainly, some sort of renal absorption must occur, otherwise one would expect a primary atrophy of the kidney with anuria to follow a complete ureteral block; neither would one expect groups of renal tubules to continue functioning long after occlusion of the ureter, whereas other groups would show atrophy. Were there not some type of reabsorption of pelvic contents by the kidney pelvis, the contents of the hydronephrotic sacs would become stagnant pools of high concentration instead of fresh water lakes of low concentration which are found in the sacs of progressive hydronephroses.

With this renal reabsorption in mind, the experimenters went further with their work in an effort to prove that the renal tubules, which had previously received all credit for absorption of the pelvic contents, were not the seats of reabsorption and that the theories of Cushny and Heidenhain could not bear up under scientific investigation. They based their conclusions upon a study of the relation of the openings of the tubules into the calyces and the kidney pelvis and contended that such a tubular backflow was impossible of production in the human kidney. The reason for this alleged impossibility of the backflow was set forth as being due to the fact that the tubules found their way into the pelvis through diagonal slit-like openings, much like the openings of the ureters into the bladder, which necessarily would close and prevent reflex up the tubules at the slightest increase in intrapelvic pressure. All attempts to depict tubular backflow by forcible injection of the kidney with solutions impermeable to the X-ray met with little success and these authors contended without reservation that tubular backflow could not be produced by entrance through the ureter except occasionally accompanying pyelovenous backflow. To support their claims, numerous quite convincing roentgenograms of complete venous injections were demonstrated. Hinman and Lee Brown further stated that the accidents in pyelography in the distortions of renal pelvis leading to faulty diagnosis of kidney pathology could be attributed to pyelovenous backflow.

At this time, the authors reviewed the literature regarding the work that had been done on reabsorption by the tubules. Adolph Huber,[4] in 1895, studied "Resorption renale" in a living dog under varying conditions of back pressure but overlooked a venous communication. Keyes and Mahan,[5] in 1915, stated that collargol was very probably taken up by the blood vascular system and later secreted through the glomeruli and tubules. Blumm,[6] in 1914; Tennant,[7] in 1913; Eisendraith,[8] in 1914, described varied types of "extravasation, infiltration," etc., relating to the possibility of tubular secretion and reabsorption. Mason,[9] in 1914, by using collargol injections into the kidney pelvis, examining serial sections of the kidney, found that the injected material ascends into the straight and convoluted tubules and into the glomerular capsule. These findings were claimed by Hinman and Lee Brown to be impossible—because of the existing anatomic facts.

Following close on the heels of the initial publication on pyelovenous backflow, work was begun at Yale by Bird and Moise[10] in an attempt to confirm or disprove the existence of such a renal phenomenon as noted by Hinman and Lee Brown. They began their work by carrying out the work of the original investigators with a solution of iron ammonium citrate and potassium ferrocyanid, which produces the Prussian blue reaction when added to an acid formaldehyde filling fluid.

The injection of the material was made at the original pressures and every technical detail carried out as was in the initial work on the subject. Strangely enough, these writers were unable to produce the slightest evidence of a venous backflow, but did produce what they considered to be irrefutable evidence that tubular backflow does occur all through the tubular system to the glomerulus.

This claim was made on the basis of finding the Prussian blue in Henles loops, the convoluted tubules and in Bowman's capsule. Only a very few of the Prussian blue crystals were found in the veins. All of these experiments were repeated several times and, to satisfy themselves conclusively on the results of their work, the experiments were again carried out—using the kidneys in the living animal—freshly removed kidneys and eight-hour-old kidneys.

Other kidneys were injected with an India ink solution under exactly the same conditions and the same injection of the tubules took place. Furthermore, these workers noted that not a single drop of solution flowed out of the renal vein which was just the opposite to the findings of Hinman and Lee Brown. To the analogy that had been drawn between the structure of the eye and the tips of the minor calyces, Bird and Moise affirmed that from three to four layers of epithelium existed at the points of reflection of the walls of the pelvis onto the calyces, whereas the tubular openings were in direct apposition to the pelvic wall except for a single layer of cells. As to the roentgen-ray evidence of pyelovenous backflow presented by Hinman and Brown, this was considered doubtful and probably produced by rupture of tubules into closely opposed veins. In summarizing, Bird and Moise stated that the results of their experiments did not support the conception of true pyelovenous backflow as described by Hinman and Brown.

Within a month of the publication of the results of Bird and Moise, another article on pyelovenous backflow by Hinman and Redewell[11] was read at the A. M. A. Convention in April, 1927. This presentation touched but very slightly upon the negative findings of Bird and Moise and mentioned the fact that, in 1925, Emil Fuchs,[12] working independently in Vienna, confirmed the frequent occurrence of backflow while working upon human cadaver kidneys. Much of this paper was given over to an exposition of continued experimental facts seeking to prove without question the existence of such a kidney phenomenon as pyelovenous backflow. A further and more comprehensive study of the production of backflow was given however, and experimentally it could be demonstrated as occurring: 1, by injection methods in cadaver kidneys; 2, by perfusion and, 3, by injection methods intravitally. The injection method has already been described, but the experiment of perfusion as a method of production of backflow is very interesting.

A fresh kidney was used. The ureter, renal vein and renal artery were connected to cannulas. Two injection bottles were used—one containing 1% iron and ammonium citrate and the other 1% potassium ferrocyanid. One bottle was connected to the artery and one to the ureter. The vein was left open and arranged so that it would drain freely into a bottle containing 10% HCL. Manometers were attached to both the ureter and artery. The flow through the artery was started first producing a thorough perfusion of the kidney and the solution drained out of the renal vein into the HCL without any change in appearance. Flow was now started in the ureter and continued up to pressure of 35 to 40 m.m. of mercury. At this point, a blue precipitate appeared in the HCL. When the pressure was lowered to 30 m.m., precipitation would cease, but at a slight elevation it would be noticeable at once. This showed definitely that the solution passed up through the ureter, through the kidney substance and by way of the renal vein. This would certainly appear to prove conclusively the existence of pyelovenous backflow.

Hinman and Redewell went further to hypothecate upon the various routes by which injected material might travel from the pelvis of the kidney into the blood stream. Those channels considered to be of importance in this function were (1) osmosis, (2) phagocytosis and (3) permeability of membranes. These studies were so elaborate and so full of technical detail that time will not here allow a discussion of their relative importance. Regarding permeability of membranes, however, it is worth while to go over some of the work done by Jacques Loeb[13] of the Rockefeller Institute on this subject and show the similarity in results experienced by Hinman and Redewell in their experiments.

Loeb showed that the toxic effect of high concentration of salts with univalent cations could be inhibited by small quantities of salts with bivalent cations. He showed that a pig's bladder will swell greatly when injected with sodium chloride followed by water; but the swelling is inhibited if a small quantity of calcium chloride is added to the solution. Loeb's explanation of this swelling of proteins is the hyalinization of fibers of the bladder wall; that, if the bladder is treated with sodium chloride and then washed with water, the actual washing out of the salt ionizes the molecules of the cells, thus causing the swelling.

With these laws established by Loeb, Hinman and Redewell proceeded to apply them to the hydronephrotic sacs of kidneys in an effort to see if they held true. Both the pelves of normal kidneys and hydronephrotic sacs were first injected with 1/10 N. saline solution under 20 m.m. pressure; this was increased to 35-40 m.m., etc.,

and the rate of absorption noted.[15] These pelves were now washed out with water and sodium chloride solution and it was found that the membranes became ionized and a greater pressure was necessary to produce pyelovenous backflow than when the membranes were not ionized. "Therefore, the dangers of pyelovenous backflow at the time a pyelogram is made, would be removed if the pelves were first washed out with 1/10 N. sodium chloride and then sterile water, thus ionizing the membranes because the pressure required to produce the backflow will be so much increased that there will be practically no danger of pyelovenous rupture occurring."

With these interesting findings regarding the action of chlorides and other salts on the permeability of membranes, an investigation of the relation and effect of chemical components of hydronephrotic sacs was entered into. As early as 1881, Arnozan and Voillard[14] proved that ligations of the parotid gland would result in atrophy of the organ. Likewise, Charcot,[15] in 1878, showed that ligature of the common bile duct resulted in cirrhotic atrophy and jaundice. Arnozan and Voillard also showed that ligation of the duct of Wirsung produced atrophy of the pancreas. In all of these organs where atrophy is produced the secretions are all alkaline, whereas in the large renal sac that forms as a hydronephrosis the secretion is normally acid.

This led Hinman and Redewell into some very interesting and enlightening discoveries in experiments with the kidneys of rats and rabbits.

Five white rats were fed on an alkaline diet for two weeks; five were kept on a regular acid diet for controls. The left ureters in all the rats were ligated and cut near the bladder. All the rats were killed after two days. At autopsy, it was interesting to find that the rats with high acid urine showed considerable dilatation of the kidney pelves, whereas the rats with the alkaline urine showed no dilatation.

Another interesting experiment was performed on two rabbits whose left ureters had been ligated two months previously. These animals were anesthetized and both were found to have hydronephrotic sacs in both left kidneys. A specimen of urine was withdrawn from each pelvis through a fine needle and the acid concentration noted. The kidneys were carefully replaced and the wounds closed. One animal was now placed on an alkaline diet and the other put on an acid diet. One month later, both were killed and the specimens of both hydronephrotic sacs were mounted. Each sac was compared with the right kidney as a control. It was remarkable to find the left hydronephrotic sac of the rabbit on the alkaline diet did not increase in size, whereas the sac of the rabbit on the acid diet had increased almost twice in size. Thus, the acid concentration of the urine must certainly have much to do with the size of hydronephrotic kidneys.

Hinman and Redewell further denied the possibility of the production of complete tubular backflow as was claimed possible by Bird and Moise.

In February, 1927, shortly after the presentation of Hinman and Redewell, Lee Brown—now working in Australia—published another work contending for pyelovenous backflow on the basis of his individual experimentation.[16]

Lee Brown began by acknowledging that the claim of Bird and Moise, that the tubular system could be injected, is correct, but restricts the limit of injection to the convoluted tubules. He stated that the Berlin blue crystals that were first used were of too great size to allow passage up the tubules, but that a solution of ferrocyanid of K and ammonium citrate could be demonstrated in the tubular system—but only up to the convoluted tubules.

The principal effort of this work centered around proving the production of pyelovenous backflow by injecting such a solution as India ink into the substance of the kidney. To carry out these experiments, various types of kidneys were used, more particularly sheep, calf and human. Lee Brown found that injection of India ink solution into the cortex of the kidney would first result in the appearance of the ink in the subcapsular venous plexus of the cortex at the site of puncture. After a few c.c. have been injected, the solution begins to flow out of the renal vein. After the solution began to flow from the kidney at a regular rate, the kidneys were washed and sectioned. When these sections were viewed stereoscopically, a complete injection of the venous system was at once noted with but very little extravasation at the point of puncture. No injection of the tubular system was noted. Injection of the same type of solution into the medulla of the kidney was productive of complete injection of the venous system as was the case in the injection of the corted.

Lee Brown reiterates further that the phenomenon of pyelovenous backflow is unfortunately

only too readily obtained and that it is to be differentiated completely from any tubular injection—though both may occur in the same kidney simultaneously.

BIBLIOGRAPHY

1. Hinman, Frank, and Lee Brown, R. K.: Pyelovenous Backflow. J. A. M. A., 82: 607-612, (Feb. 23) 1924.
2. Gignon, C.: Reserches sur l'ischurie, L'onion med. 1856, p. 297.
3. Hinman, Frank; Morridon, D. M., and Lee Brown, R. K.: Methods of demonstrating the circulation in general: As applied to a study of the renal circulation in particular. J. A. M. A., 81; 177-184, (July 21) 1923.
4. Huber, Adolph: Reserches physiologigues sur la resorption renale. These, Paris, 1895.
5. Keyes, E. L., Jr., and Mahan, H.: American Journal Medical Sciences, 1915, exlix, 30.
6. Blum, V.: Uber den Wert der Pyelographie und anderer methoden zum Nachweise von Dilataionen des Nierenbeckens, Wien. med. Wehnsehr, 62: 1269, 1912.
7. Tennant, C. E.: Ann. Surg. 57: 888, 1913.
8. Eisendrath: Internat. J. Surg., 27: 161, 1914.
9. Mason, J. M.: Dangers attending injection of the kidney pelvis for pyelography. J. A. M. A., 62: 839 (March 14) 1914.
10. Bird, C. E., and Moise, T. S.: Pyelovenous Backflow. J. A. M. A., 86: 661-665, (March 6) 1926.
11. Hinman, Frank: Redewell, F. H.: Pyelovenous Backflow. J. A. M. A., 87: 1287-1293, (Oct. 16) 1926.
12. Fuch, Felix: Untersuchungen uber die innere Topographie die Niere, Zusch. f. urol. Chir. 18: 164-180, 1925.
13. Loeb, Jaques: Salts and Animal Membranes: J. Biol. Chem. 31: 343, (Aug.) 1917.
14. Arnozan and Voillard: Compt. rend. Sec. de biol., 1881, p. 234.
15. Charcot and Combouet: Progreso med., 1878, p. 82.
16. Brown, Lee, R. K.: The Phenomenon of Pyelovenous Backflow. J. of Urol., xvii, Feb., 1927.

DISCUSSION

Dr. John E. Hall, Miami:

Dr. Orr has every right to be congratulated upon the presentation of this important paper, and he has fully covered the literature dealing with the subject. He has not been biased by any private opinion he might have held concerning it, but has given you a full concept; not only of the original research workers, but also the findings of later workers whose views are diametrically opposed to those presented by Hinman and Lee Brown.

It is rather remarkable that there should have been such a divergence in the findings of these different scientists, working under exactly the same conditions, and using the same tests.

It is of vast interest to the scientist as to how the dyes enter into the venous circulation, but to the practicing physician it is of small moment whether they gain entrance through the openings into the tips of the minor calyces and thence into the large superficial venules, as claimed by Hinman and Lee Brown; or by rupture, under pressure, of the tubules directly into the large and straight arcuate veins intimately related to them, as claimed by Bird and Moise.

Both are agreed that under a certain degree of intra-renal back-pressure, that the dye enters into the general venous circulation. This knowledge is sufficient for the practicing physician, since he is only interested in the fact that sufficient intra-renal back-pressure assures the passage of septic material from the infected kidney pelvis into the general circulation.

This fact was undoubtedly the cause of former untoward results, sometimes following pyelography, when urologists were accustomed to use radio-opaque fluids for injection into the kidney pelves, which were not compatible with introduction into the circulation.

It also explains the rapid onset of severe constitutional symptoms associated with infected hydronephrosis of pregnancy. In this form of hydronephrosis, the dilatation of the renal pelves is much more rapid than that occurring from vesical obstruction, due to hyperplasia of the prostate; or from ureteral obstruction due to stricture, etc.

In these latter forms, the dilatation of the pelves is gradual and the backflow is relatively slow in its development. Such being the case, the general system develops a certain tolerance to the absorption of the septic material, and while the urosepsis eventually becomes marked, there is no acute fulmination of constitutional symptoms, as is seen in the hydronephrosis of pregnancy.

This paper is opportune and timely, since it forcibly calls attention to the dangers resulting from back-pressure, due to hydronephrosis and the absorption of septic material from the infected renal pelvis.

Dr. E. S. Gilmer, M.D., Tampa:

I think Dr. Orr's review of the literature of this very interesting subject is very comprehensive and complete.

The mechanism or manner in which pyelovenous backflow takes place has never been definitely decided, but, I think, Lee Brown's theory is the one generally accepted. However, that of Bird and Moise bears consideration. We know that regurgitation of urine from the bladder to kidney may occur; and, since the anatomical relationship between the tubules and renal pelvis and that between the bladder and ureter are similar there appears to be no reason why urinary reflux from

renal pelvis may not occur. On the other hand; if this regurgitation into the tubules does take place it cannot do so until the reflux pressure is equal to or greater than the secretory pressure of the kidney.

Hinman and Lee Brown think that a fissure or break occurs in the mucous membrane of the renal pelvis in cases of hydronephrosis and permits flow into the veins of the kidney. We know that by injecting fluid into a healthy bladder forcibly we can produce fissures in the mucous membrane, but this does not occur in cases of acute retention or normal filling of the bladder; and it does not seem any more reasonable why fissures will occur in renal pelvis in hydronephrosis than they would in the bladder in acute retention.

Whatever the correct theory, it is understood that this interesting phenomenon takes place and is a wonderful provision to protect the kidney tissue from destruction in cases of urinary obstruction and hydronephrosis.

Dr. Roy J. Holmes, Miami:

I have enjoyed Dr. Orr's paper very much. It is one of the most complete resumes of the literature on this subject that I have heard. In the closing paragraphs, he refers to Lee Brown's work in Australia, but omitted what seems to me to be a very interesting phenomenon which this observer reported. Lee Brown also injected India ink into the renal artery and recovered it readily in the renal vein. However, he could not reverse this process by injecting the ink into the renal vein no matter how much pressure he brought to bear upon the injected vein.

Several years ago I had a patient walk into my office and when I questioned him he told me that he had not passed a drop of urine in twelve days and thought it about time that something was done about it. Urological examination revealed the fact that both ureters were blocked by calculi. It was four days before we could dislodge one of these calculi and allow urine to drain into the bladder; making sixteen days of complete anuria. He apparently was not seriously ill, although he had a very marked uriniferous odor from his entire body. Since then I have believed that pyelovenous backflow involves a safety mechanism and probably accounts for the fact that occasionally a case of total anuria will live twenty or thirty days.

I think it would be extremely interesting if Dr. Orr would gratify the extreme interest in this work by conducting a little experiment on the lower animals. I would suggest that he ligate both ureters in a series of cases and then remove both kidneys in another series and compare the life interval or expectancy in the two series of animals. I believe that the ligated animals will live much longer and I would not be surprised if the phenomenon of pyelovenous backflow did not constitute a "safety valve" mechanism which would explain this.

Dr. Louis Orr, Orlando (closing):

Dr. Holmes referred to the work of Lee Brown with the injection of India ink into the renal artery. The principal result of this work was that it was found to be quite easy to irrigate the kidney tissue by way of the renal artery and get a ready flow through the vein, but if the procedure was reversed and the kidney injected through the renal vein, no flow could be obtained through the artery. It made no difference how much pressure was exerted on the venous side and fluid cannot be forced any further along the course of the veins than the efferent glomerular plexus. Rupture of the kidney would occur before any further penetration could be obtained.

I do not know of any experiments with double ligation of the ureters in relation to pyelovenous backflow, although Hinman reported several experiments with ureteral ligations in a paper on hydronephrosis several years ago.

In conclusion there is one point that I would like to carry home, and this is in regard to the reaction of urine in cases of hydronephrosis, a condition so commonly seen in so-called pyelitis of pregnancy. This point can be better authenticated by referring to a paragraph of the paper just read. "This led Hinman and Redewell into some very interesting and enlightening experiments as well as discoveries with kidneys of rats and rabbits. Five white rats were fed on an alkaline diet for two weeks; five were kept on a regular acid diet for controls. The left ureters in all the rats ligated and cut near the bladder. All the rats were killed after two days. At autopsy, it was interesting to find that the rats with high acid urine showed considerable dilitation of the kidney pelves, whereas the rats with the alkaline urine showed no dilatation."

"Another interesting experiment was performed on two rabbits whose left ureters had been ligated two months previously. These ani-

mals were anesthetized and both were found to have hydronephrotic sacs in both left kidneys. A specimen of urine was withdrawn from each pelvis through a fine needle and the acid concentration noted. The kidneys were carefully replaced and the wounds closed. One animal was now placed on alkaline diet and the other put on an acid diet. One month later, both were killed and the hydronephrotic sacs of both were mounted. Each sac was compared with the right kidney as a control. It was remarkable to find the hydronephrotic sac of the rabbit on the alkaline diet did not increase in size, whereas the sac of the rabbit on the acid diet had increased almost twice in size. Thus, the acid concentration of the urine must certainly have much to do with the size of hydronephrotic kidneys."

That would bring home to us at once the certain advisability of giving alkalies in the pyelitis cases, particularly the pyelitis cases complicated by pregnancy, as they usually have a hydronephrosis associated with the pyelitis. It is usually the dilatation of the calyces at the outset of the infection and as the condition progresses it becomes an extra as well as an intrarenal dilatation.

DIABETES INSIPIDUS — RESULTS OF PITUITARY EXTRACT AND PITRESSIN ADMINISTRATION—REPORT OF A CASE*

Herbert L. Bryans, M.D.,
Pensacola.

This paper is not intended as an exhaustive review on diabetes insipidus, but rather a report of a case of diabetes insipidus in which no organic disease could be found, and showing a comparative study in the treatment with the posterior lobe of the pituitary body and pitressin, the newly separated hormone from the posterior lobe.

Like many other diseases this one dates back to the sixteenth century when Willis separated it from diabetes mellitus. This condition, unlike diabetes mellitus, affects more frequently younger persons and is more common in males than females. It is a clinical syndrome without a uniform pathologic basis, having two principal symptoms, polyuria and polydipsia. The urine is quite pale, almost colorless, of low specific gravity and contains as a rule no abnormal elements.

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

There has been considerable interest and experimental work in the subject in recent years, but the cause and the mechanism by which diabetes insipidus is produced are still obscure. It is known that polyuria frequently follows injuries of the base of the skull and is common following injuries of the posterior cranial fossa. Diabetes insipidus sometimes appears during convalescence from any of the acute infectious diseases and may follow syphilitic basal meningitis. Persistent polyuria is commonly observed in association with tumors of the midbrain and congenital tumors of the hypophysis. Those that are interested in the subject will find any number of explanations and theories in the literature relating to it.

The onset may be sudden, as in the cases following fright or trauma; or more gradual, when associated with slow-growing tumors. As a rule, the course is chronic and usually runs for years. Seldom are any of these patients incapacitated to any considerable extent. Many drugs have been tried, but until recently without any measure of success. It has been demonstrated that regardless of the cause of the disease that prompt and complete relief of the symptoms is obtained by the daily injections of posterior lobe pituitary extract, which, to my mind, strengthens the idea that this disease is due to pituitary hypofunction (posterior lobe dysfunction).

During the last year it was demonstrated by Dr. Kamm and his associates in the research laboratories of Parke, Davis & Co. that the posterior lobe extract of the pituitary gland contained two very definite principles or hormones and they were successful in isolating them. The one of interest in the treatment of diabetes insipidus is the blood-pressure raising and antidiuretic principle which is on the drug market as pitressin. Recently Gargle, Gilligan and Blumgart have shown that pitressin produces the full beneficial effect of pituitrin when administered to diabetes insipidus patients, thus proving that pitocin, which is the uterus-contracting principle, is devoid of any effect on these cases.

Case Report.

P. Q.—White girl, age 12 years. First saw her Nov. 15, 1928. Nothing of importance obtained from family history. Her chief complaint was constant thirst for water and passing large amounts of urine, restlessness, nausea and vomiting at nights.

Previous History.—At the age of 4 months she fell over the foot of bed, hitting her head on the floor. After a few minutes she stopped crying and apparently there was no injury. Had whooping cough at 5 years of age and measles at 7 years. There were no other diseases or injuries. She had always been a healthy child, growing a normal height every year, but slightly underweight. Had always been very bright in her studies at school.

Present Illness.—She was perfectly well up to April 1st, 1928, when she retired as usual, but found she could not sleep for extreme thirst and frequent desire to urinate. There is no history of indiscretion in diet or other apparent cause for these symptoms. At this time she weighed 63 pounds. After three days the symptoms did not improve; and in addition to the polyuria and polydipsia she developed restlessness accompanied by spells of vomiting. At this time a physician was consulted who advised the withdrawal of all carbohydrates. About three weeks later her appetite became ravenous and she began to gain weight rapidly; by September she had reached 90 pounds, at which time the weight remained stationary until Nov. 15th, 1928. She was well developed and formed for a child of her age—had never menstruated. Did not perspire, even during the really hot days of last summer; hair and skin were dry; she complained of her face and ears getting hot, with bilateral flushing of face which she would relieve by applications of cold water. Her mother stated that she was very irritable and would average from 12 to 14 liters of urine in the 24 hours; that she complained very often of a severe pain in the right temporal portion of the head.

Physical Examination.—The girl did not look sick. The heart and lungs were normal; skin and hair were dry; thyroid not apparently enlarged; the abdomen a little relaxed and full, but essentially negative.

Blood pressure: S. 110, D. 80. Blood count showed the leucocytes to be 11,000, polymorphonuclears 70%, eosinophiles 2%, lymphocytes 28%. Urine (24-hour specimen) obtained Nov. 17th, and during one of the severe vomiting spells, totaled 4½ liters, specific gravity 1004, reaction acid, albumen, sugar, indican and bile negative. Microscopical: there were a few squamous epithelial cells and a large number of oxalate crystals. Two weeks later (Dec. 3rd) total 24-hour urine output measured 14 liters (there was no vomiting at this time). Weight 92 pounds; height 54¾ inches. Her average normal standard weight was listed at 75 pounds. There were no enlarged glands and blood Wassermann was negative. Basal metabolic rate, minus 14%.

Dr. R. G. Nobles, the consultant eye, ear, nose and throat specialist, reported the following:

"External examination of eyes negative, except for slight catarrhal conjunctivitis. Reaction to both light and accommodation normal. Muscle action normal. Tension normal. Visual field normal. Ophthalmoscopic examination reveals normal appearing fundus. Transillumination of sinuses negative. No intranasal evidence of sinusitis."

The roentgenologist, Dr. J. M. Hoffman, reported the following:

"No evidence of erosion of inner table of skull. Sella turcica normal in outline and measurements. No erosions at base of skull. Well-developed frontal sinuses on both sides.

Conclusions.—No evidence of intracranial pressure (general) or of localized pressure necrosis of bony shell. No evidence of possible foci of infection in skull."

Treatment.—She was given the usual preliminary mercurial purge and put on sodium bromid before meals with the oral administration of pituitary extract (whole gland) grs. 1, thyroid grs. ½, ovarian substance grs. 2, t. i. d. Up to Dec. 14th, the nausea and vomiting was much improved and the weight reduced to 88 pounds, but she continued to pass around 14 liters of urine. At this time, all medication by mouth was stopped and hypodermic injections of pituitrin (0) were started. The first dose was 0.3 c.c. at 5 p. m. and the dose was increased 0.1 c.c daily at the same hour until 1 c.c. was given. About the time 0.5 c.c. was attained there was a reduction of urine to 9 liters and a general feeling of well-being. At no time following these injections was there pallor of the skin, uterine cramps or stimulation of the bowels. On Dec. 26th, the hypodermics were divided into two doses ½ c.c at 9 a. m. and ½ c.c at 5 p. m. After a few days the urine output was further reduced to 6 liters. All the nausea and vomiting had completely disappeared. On Jan. 10th, 1929, the hypodermics were replaced by an intranasal spray of 1 c.c. of pituitrin divided as follows: ¼ c.c. at 8 a. m., ¼ c.c. at 4 p. m., ¼ c.c. at 7:30 p. m., and ¼ c.c. at midnight, at which time she usually waked up to empty bladder. Prior to the use of pituitrin she

was awake practically all night and now she only awakened at 12 o'clock and went back to sleep until 6 a. m. On Feb. 1st, the urine output remained at 6 liters and the pituitrin was increased to 1.5 c.c. in the 24 hours. Immediately the urine was decreased to 5 liters; weight 87 pounds, blood pressure: S. 108, D. 68. One week later all medication was stopped for seven days and during the first 24 hours the urine increased to 9 liters and it remained between 8 and 9 liters during the period of no medication and she gained two pounds in weight. On Feb. 27th we substituted with pitressin intranasally ½ c.c. in 24 hours, having in mind that pitressin is standardized to the pressor activity of the double strength pituitrin (S.), therefore, ½ c.c. of pitressin is equivalent to 1 c.c. of pituitrin (O). Immediately the urine was reduced to 6 liters and the dose of pitressin was increased to 1 c.c. in the 24 hours when the urine was further reduced to 3½ liters. Blood pressure at this time was S. 108, D. 70, and weight 89 pounds. The dose of pitressin will be increased further and I believe with a corresponding decrease of urine.

This case has not used pitressin over a sufficient period of time to conclude a very definite summary; therefore, a complete supplementary report will be made at a later date. However, to summarize this individual case up to this date, I would state the following: The oral administration of pituitary extract is not effective in the treatment of diabetes insipidus. These cases tolerate large doses of posterior lobe pituitary extract. The full physiological effect is equally obtained by intranasal application as by subcutaneous injection. Definite action begins about two hours after the injections and lasts only 24 hours. The required daily dose is more effective if divided into three or four portions and used every six to eight hours. Pitressin has the advantage over pituitrin in the treatment of diabetes insipidus in that sufficient dosage to control the polyuria can be used without producing uterine cramps or stimulation of the bowels. There has been no increase of blood pressure in this case.

BIBLIOGRAPHY

Bedside Diagnosis: Blumer. W. B. Saunders Co., 1928.

Text-Book of Medicine: Cecil. W. B. Saunders Co., 1927.

Diabetes Insipidus: Fink, E. B. Archives of Pathology, 6: 102-120. (July) 1928.

Smith & McClosky: J. Pharmacol., 1924-5, 24, 371.

Research Bulletin No. 7, 1928. Parke, Davis & Co.

W. G. Downs, Jr.: Annals of Internal Medicine, (Dec.) 1927.

DISCUSSION

Dr. J. D. Love, Jacksonville:

I think that none of us are in a position to state the cause of most cases of diabetes insipidus. So many causes have been assigned for this condition, that I am inclined to regard it as symptomatic rather than a pure disease entity. But whatever the causative factor, we feel that in most cases there is a hypo-secretion or dysfunction of the pars intermedia or possibly disease of the tuber cinereum. I cannot help believing that the case reported by Dr. Bryans was due to some infectious process possibly very remotely removed from the brain and the exact location of which had not yet been determined. I reach that conclusion mainly from the high leucocyte count manifested in the case and the relatively great increase in the polynuclears.

Most of us know that pituitrin does not cure diabetes insipidus. Most of us, too, are aware that in a great many cases, no matter how carefully administered, pituitrin does not even relieve polydipsia and polyuria, but that in a small minority of cases it does relieve the patient of the distressing symptoms that occur in connecton with this disorder. And we must still regard it as a most valuable therapeutic agent, one to which we might assign a place among such valuable and life-saving agents as insulin, which does not cure diabetes mellitus, and thyroid extract, which does not cure cretinism. There is very much in the paper that has just been presented that commends itself to our most careful consideration, and I am most positive that at some future time many of us will recall very gratefully the paper to which we have just listened.

Dr. Herbert L. Bryans, Pensacola (closing):

I want to thank Dr. Love most cordially for his very kind discussion of this paper. I appreciate it very much.

There is one point that I want to stress in this individual case: I think in the majority of these cases where the symptoms are relieved with pituitrin or pitressin that the effects usually last about two days. In this particular case, however, the effects were completely gone within twenty-four hours. But the polyuria will come back to the original starting point.

SURGERY OF THE GALL-BLADDER AND DUCTS*

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Jacksonville.

There are so many phases of the problem of surgery of the gall-bladder and ducts that require consideration in a complete discussion of this topic, that I shall not attempt to cover more than a small part of the subject, confining my remarks to some of the problems which frequently call for solution in the every-day practice of surgery, and omitting both the very rare cases, and the very simple and obvious problems which practically solve themselves.

In the diagnosis of disease of the biliary tract, the cases of acute biliary colic, and acute suppurative cholecystitis with their characteristic symptoms, do not require much study to place them on their proper diagnostic shelf. It is the cases which consult one for chronic ill health of various kinds, of months or years duration, which tax one's ability to untangle a mass of relevant and irrelevant evidence, and finally trace back to their original source, presenting symptoms which often in themselves point to nothing.

These cases rather naturally group themselves under two headings:

First, those in which the patient complains of symptoms referable to one or more parts of the gastrointestinal tract; and secondly, those who are suffering from some secondary remote sequel of biliary infection, and are not cognizant of the original infection.

In the first class fall those cases of chronic colitis, and those cases where the stomach is calling attention to itself as the offending organ, with such symptoms as epigastric fullness and distress after eating, sour stomach, heart burn, etc., when in reality it is lying as usual, and the pathology is to be found elsewhere. Usually a clear well-taken history will lack the periodicity, the automaton-like regularity, and the food relief of ulcer, and will by its very vagaries, direct suspicion to the gall-bladder. These are the short, fat, short-necked, short-waisted dyspeptics; in contradistinction to the long, lean, hungry-looking cases of ulcer, carcinoma, and ptosis, which present similar symptoms at times.

The second group comprises those whose presenting symptoms, the trouble from which they really seek relief, are on first sight, far removed from the gall-bladder. My records of the past two years show as prominent examples of this class, two cases of glaucoma, one of which also had chronic iritis, and recurring phlebitis of one femoral vein, all of which were traced back to an infected gall-bladder; six cases of migraine type of headaches; one case of brachial plexus neuritis; two cases of bronchial asthma; and one case of depressive psychosis. These are the cases which remain relieved of their symptoms entirely, or are greatly improved. There were four other cases of migraine headache and two cases of bronchial asthma which were not relieved, though rather definitely tied up with a gall-bladder history, and showing definite gall-bladder pathology at operation. In this group of cases the patients are so impressed with their immediate trouble that it is often difficult to get a satisfactory past history, but persistence in effort, and complete and thorough examination will usually bring to light the gall-bladder trouble, if there has been any.

Of great assistance in a confirmatory way are barium X-ray study of the gastrointestinal tract and dye study of the gall-bladder. Of lesser importance are analysis of the gastric contents and biliary drainage with the duodenal tube. I have never had a case where study of bile obtained with the duodenal tube was of sufficient importance to alter my opinion of the diagnosis as arrived at prior to this study. I feel that dye study offers more of value concerning the physiology of the gall-bladder than of the pathology, but it is a valuable aid in its study.

When we have arrived at a diagnosis of biliary disease we are then confronted with the problem of relieving it and curing the patient in the surest, safest and quickest way possible. We believe that surgical treatment offers the best, and often the only hope of a cure. We believe also that surgical treatment offers its best chance for a cure, with least danger, and least remaining morbidity, when advised and practised early in the course of the disease, before permanent damage is done to the liver or pancreas or to the drainage systems of these two important organs. We feel that surgical interference is imperative in the cases of severe infection, stones which are blocking drainage, and in repeated and severe colics; and that even in the milder types of chronic infection the sum of the remote dangers of delay, the constant discomfort, loss of efficiency, and loss of time in these patients outweighs the dan-

*Read before the Florida East Coast Medical Society Meeting, Daytona Beach, June 15, 1929.

gers and temporary disability which are a part of surgical treatment.

When operative intervention is advised and accepted it then becomes our duty to first place the patient into the very best possible defensive position against the ordeal of biliary surgery. To this end, in all cases, we prepare them by filling them full of fluids for twenty-four hours before operation. In the cases of jaundice a test for coagulation time is done on the blood, and if the time exceeds five minutes they are given the additional preparation of calcium chloride intravenously according to the plan of Walters. Some are given blood transfusion.

The lowering of surgical mortality during the past few years has been due quite largely to better preparation of patients for operation and a better understanding of the necessary postoperative care, rather than to perfection of surgical technique. These pre- and post-operative procedures therefore assume a most important role in the care of these cases.

The technique of surgery of the biliary tract ranges from the very simple to the most difficult in the realm of surgery. There are certain points which must be observed in order to render this branch of surgery technically safe. We believe that adequate exposure is of primary and absolute importance. An otherwise easy operation can be made difficult by poor exposure. A trite truism by one of our noted surgeons is to the effect that healing takes place from the sides of an incision, and not from end to end, and that therefore long incisions heal as rapidly as short ones. It is well to remember this in planning a gall-bladder incision. We have always used the longitudinal incision in our work, and we feel that none of the others offer sufficient advantages over it to outweigh their disadvantages of complexity. We use the Labat field block anesthesia in the abdominal wall in addition to a general anesthetic and I am sure that it gives us much more satisfactory relaxation of the abdominal wall, and consequently easier exposure, with less retractor trauma and easier closure. Cutting of the round and falciform ligaments of the liver between clamps, and retracting the liver in this way, is a useful technical trick. We believe that the indications for cholecystostomy are few, and our practice is to drain the gall-bladder first, in those cases of irremediable occlusion of the common duct, where permanent drainage into the stomach by cholecysto-gastrostomy is provided; secondly, in pancreatitis or cholangeitis where external drainage is advisable over a considerable period of time; and thirdly in those desperately ill patients with an acute infection who can stand only a minimal amount of surgery, where drainage under local anesthesia is used as a life-saver and as a first step in a graded operation, designed to later remove the pathology. The remainder of the cases in our hands have a primary cholecystectomy because of the feeling that the pathology is in the gall-bladder wall, and that removal of the contents of the infected organ, which are by-products, does not eradicate the pathology which is causing the symptoms.

In the removal of the gall-bladder we insist upon one of two things being done to prevent injury to other structures; either a complete dissection and identification of the cystic duct, which is ligated under direct vision, or in those thick walled and edematous gall-bladders, where tissues are friable and dissection difficult, an incision of the peritoneal coat and enucleation of the mucous and submucous coats, closing the peritoneal coat and obliterating the remaining shell of the organ. We omit drainage in some of our easy clean cases, where there is no oozing. In the others we usually drain with a simple folded rubber tissue drain down to the gall-bladder fossa.

Where there are stones in the common duct it is practically always dilated, sometimes to an almost unbelievable size. We feel that all grossly dilated common ducts should be opened and explored, and I have never found any exploring instrument which compares with the little finger, when the duct is large enough to admit it. I have frequently found in this way stones impacted in the ampulla or in the pancreatic portion of the duct which had, because of their soft consistency, escaped detection by a sound and which had permitted a bougie to pass them and enter the duodenum. In one case there was a thick putty-like encrustation the size of a small pecan filling the ampulla of Vater, which had a canal through its center admitting the probe into the duodenum. It was felt with the tip of the finger in the duct, and could only be removed by the transduodenal route, incising and peeling off the ampulla.

Regarding closure of the abdomen I will only say that we have never yet found anything which would make a hard closure easy.

In our experience the most common and annoying post-operative complication of cholecystectomy, and therefore the one of most practical

importance is post-operative vomiting. This seems to occur most commonly in those cases where the gall-bladder is a functioning organ, and least so where it has ceased to function before surgery is instituted. This lends weight to the assumption that too rapid delivery of unconcentrated bile to the duodenum by the common duct, which has not yet become dilated, is the cause of reverse peristalsis, and rejection of the bile-stained contents of the stomach by vomiting. This is usually relieved spontaneously or by simple gastric lavage, but if continued the case may progress to one of alkalosis, as is indicated by a fall in the blood chloride content, and a rise in the C02 combining power of the blood. These elements should be determined in all cases of persistent vomiting, and calcium chloride administered intravenously when alkalosis is impending. I have seen striking results and immediate cessation of vomiting after the administration of one ampule of 10% calcium chloride.

Among the serious and apparently unavoidable post-operative complications are so-called liver shock, or a cessation of liver metabolism from liver trauma or chilling. Crile has advocated the use of diathermy over the liver area during operation for the prevention of lowering of liver temperature, claiming that for each degree of lowering of temperature there is a diminution by 10% in the liver's metabolic processes. Also gross accumulations of bile above the liver, from intraperitoneal leakage, pushing the liver downward, and compressing the vena cava, as recently described in a paper from the Mayo Clinic. Pneumonia and septic emboli to the lungs and elsewhere are two other serious complications which are unavoidable. I have had one case of the latter during the past 18 months, the embolus occurring on the fifth day post-operative in a clean and easy case, which never at any time showed the slightest evidence of infection in the wound. There resulted an abscess of the lower lobe of the right lung from which the patient was desperately ill for many weeks, but finally recovered completely, and has been well since.

Among the more serious complications which are due to technical errors and which are theoretically avoidable may be mentioned hernia, biliary fistula, and jaundice due to a remaining stone or to stricture of the ducts from injury. These complications happen least often in the hands of those who are meticulously careful of all the many details encountered in the realm of biliary surgery, and the goal is worth all the striving.

EXPERIENCES IN THE FIELD OF X-RAY THERAPY IN SOUTH FLORIDA*

JOSEPH H. LUCINIAN, M.D.,
Miami.

The purpose of this paper is to give a resumé of conditions met with more or less prevalently in South Florida and which are amenable to roentgen therapy.

The action of the X-rays on tissues may be classified under the following headings, depending on the dosage and nature of the tissues irradiated:

1. Stimulation of function.
2. Inhibition of function.
3. Modification of function.
4. Destruction of diseased tissue.

By modifying the factors of distance, time, filtration, and wave-length we arrive at the desired dosage for the individual case. It is unnecessary to emphasize the potential dangers of unskilled management of X-ray therapy. X-ray dermatitis is regarded as practically incurable and the history of roentgenology is replete with numerous, tragic cases of pioneers in this field who have sought in vain for relief from the mutilating effects of their burns and deformities acquired during their early, unguarded experiences.

Tissues are biologically classified as radiosensitive and radioresistant. The terms are relative. Cells are most susceptible to radiation the closer they approach the embryonal type. Cells in kariokinetic division are more easily destroyed than those in the resting stage. Thus such tissues as the male and female gonads, the germinal layers of the skin, lymphoid tissues and fibroid tumors are most sensitive to the effects of radiation. In contrast to these, the stratified layers of the skin and nerve cells are most resistant to the X-rays as their highly specialized function is furthest removed from the simple, undifferentiated, embryologic type of cells.

The quality of an X-ray beam refers to its wave-length, which in turn governs the penetrability of the rays. The shorter the wave-length the greater their penetrability. Obviously, it is most important to know just what penetration is desired in a given case. The skin must be protected from injury but the subjacent pathological tissues must not be underradiated.

The diseases under consideration are divided into the superficial and deep therapy groups. The

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superficial group includes all the skin diseases and lesions of its appendages.

The most frequent call for X-ray therapy during my several years' residence in this section has been for the relief of persistent and intractable skin diseases in which all other forms of therapy have failed.

Foremost in skin conditions is epidermophytosis, which has probably superseded in prevalence and importance all other common skin conditions in this section. The X-rays inhibit the development of deeply imbedded fungi which are otherwise inaccessible to topical applications, and recur with annoying regularity in many cases. The treatments are given at weekly intervals, unfiltered. As the effects of the X-rays are cumulative it takes several treatments to make effects apparent.

In pruritis the use of the X-rays offers marked symptomatic relief from the constant itching through the sedative action of the rays on the nerve endings and the nerve end-organs in the skin.

In seborrhea the improvement is noticeable within 10 to 12 days, the skin becomes smooth and clear and the pores with their oily secretions less prominent. The overactive sebaceous glands are checked by inhibitive doses of X-rays.

Condyloma respond well. An extensive cauliflower growth entirely encircling the glands of a boy of twenty-one disappeared completely and permanently after one treatment.

In proliferative diseases such as epitheliomas and keratotic growths about the face which eventually develop dangerous, malignant infiltration, destructive doses of X-rays are applied vigorously and repeatedly causing their complete disappearance, meanwhile protecting the surrounding normal skin. The lesions are commonest in elderly persons but occasionally middle-aged individuals will present well-developed epitheliomas. Recently a physician, aged 39, had multiple epitheliomas on the backs of both hands, also keratotic lesions on the left temple, left ear, forehead and the bridge of the nose. Under intensive treatment all the lesions disappeared without exception and have shown no evidence of recurrence.

Eczematous conditions show prompt improvement, especially the chronic cases of many years' duration, giving immediate symptomatic relief. The dry, scaly types clear up after several stimulative doses, the skin returning to a smooth appearance free from itching.

Recent experience of X-ray therapy applied to carbuncles has shown most gratifying results. I have treated 14 patients in all. In distribution the back of the neck was involved most frequently, the number being five; next came the right axilla with three. The left axilla was involved in two, the cheek, the nasal septum, the back, the abdominal wall, the thigh and the knee once each. Two patients had multiple carbuncles. Carbuncles on the cheek and the upper lip are the surgeon's bete-noir, because of the extremely common danger of cerebral embolism and septicemia following ill-timed surgical interference. Under X-ray treatment these dangers are minimized and obviated. In all the aforementioned cases after one or two exposures to stimulative doses the previously widespread inflammation is well walled off and sharply circumscribed, so that either spontaneously or by simple incision the entire necrotic core comes out en mass and healing is prompt without further extension of the infection to the surrounding glands. By the action of the X-rays hyperemia is induced with leucocytic infiltration which rapidly walls off the infection and by phagocytic action hastens the softening of the core. Through X-ray treatment the patient is spared much unnecessary suffering, the excruciating pain becoming more perceptibly diminished even after the first exposure. The time of convalescence is greatly shortened; the danger of septicemia or extension is reduced to a minimum; drainage is established early and recurrence is entirely avoided.

The success of X-ray treatment of acne varies with the experience of the radiotherapist and the perseverance of the patient in following up the treatment. The X-ray effects are cumulative and undesirable sequalæ should be closely watched for, particularly in blonds who suffer most frequently from acne and are more susceptible to X-rays than brunettes. In my hands about 60% remain entirely free from the lesions but the treatment must be repeated at varying periods.

Enlarged thymus gland, consisting as it does of rapidly proliferating immature lymphoid cells, responds readily and promptly to the X-rays. The gland shrinks rapidly and there is noticeable improvement in the clinical picture of the infant. Three cases were recently treated with complete relief.

The acute type of leukemia is not amenable to the X-rays but the chronic cases are markedly benefited and their life prolonged in some instances as long as ten years. After each treat-

ment there is decided improvement in the symptoms. In these cases the leucocyte-forming structures such as the long bones and the spleen are given repeated inhibitive doses with prompt reduction of the lymphocyte or myelocyte count.

Hodgkin's disease is related to the leukemias and is similarly benefited by the X-rays. The enlarged external and internal glands are rapidly reduced in size under X-ray treatment with corresponding symptomatic improvement.

Lymphosarcomas are very susceptible to the X-rays and disappear in a spectacular manner. The treatment should be vigorous as underdosage may stimulate the malignancy to more rapid growth. I wish to recall to your memory the case of the young man which Dr. Panettiere presented to this society several months ago. The right side of his neck was occupied by a huge mass, sections of which showed unmistakable evidence of lymphosarcoma. Under intensive treatment this tumor disappeared very promptly and has shown no tendency to recurrence.

Whooping cough: The majority respond well, and after a series of treatments the whooping becomes less frequent, the cough milder, and vomiting ceases. It may be apropos in this connection to note the good results by X-ray treatment applied to the liver as cited in recent German literature on the theory that protein sensitization and metabolism play a major role in this disease.

In asthma the liver or the root of the lung is irradiated. Two cases under observation have shown marked improvement. The action of the rays is sedative on the constricting muscles and nerve endings of the bronchial walls. It seems logical that stimulative doses of X-rays over adrenals may offer some relief to those suffering from asthenia or asthma by stimulating the output of the glands.

Hyperthyroidism: The rational treatment of exophthalmic goitre is surgery. However, to undergo a serious operation as thyroidectomy a patient must be a very good risk, and frequently patients appear who are decidedly poor operative risks. In these cases the judicial application of the X-rays promises relief from the symptoms and in certain percentage of cases complete disappearance of the disease. There is also a certain type of patient who at first not a good risk for operation is rendered so after one or two moderate doses of X-rays. The case history of Miss C is interesting: A white woman, age 25, referred to me by Dr. Agos August 5, 1926, complained of extreme nervousness, palpitation of the heart, dizziness and fainting spells, general weakness, loss of weight and strength and difficulty of breathing. Her pulse rate was 120 per minute and respiration 28. She has marked tremors and a slight exophthalmos. Her basal metabolic r- obtained in Doctor Flipse's office showed plus 46. Obviously she was in no condition for operation and did not respond to Lugol solution. After the first X-ray treatment her basal metabolic rate was reduced to plus 33. After three treatments she was less nervous, had more appetite and strength and no more fainting spells. In four weeks she had gained four pounds and was working regularly. Her pulse rate was now down to 82. In three months she was entirely well and happily married.

Fibroids: The results of the X-ray treatment of fibroids are most satisfactory. The tumors disappear gradually and completely with total cessation of the bleeding. Of the eight cases treated seven have been free from bleeding and other unpleasant symptoms and one who had a recurrence of the bleeding while away from the city was given radium with complete relief. The only contraindications are: (1) very extensive tumors, and (2) fibroids complicating pregnancy. The question naturally arises concerning the danger of premature menopause by the effect of the X-rays on the ovary in treating the uterus. The ages of the patients treated by me varied from 25-58. I am glad to report that in my experience this unpleasant complication has never occurred. Of course one can be too timid and apply a dose that would fall short of the objective. Those cases selected for treatment are most grateful for the relief afforded without being subjected to the hazards of surgery, or the inconvenience of hospitalization.

Sarcoma: Lymphosarcoma and giant cell sarcoma are among the type that respond well to irradiation, but the X-rays are not so effective in fibrosarcoma. True, these tumors disappear with astonishing rapidity for the time being but almost always recurrence is the rule. Distant metastasis render treatment of the local condition useless. A case of a white girl, age 2, illustrates a typical case. A hard tumor, the size of a hen egg, developed on the medial aspect of her thigh. The tumor was excised and soon recurred. Again it was excised and radium applied. It occurred the second time when she was referred to me by Dr. Raap for deep therapy. Under intensive X-ray treatment the tumor disappeared completely. Six

months later I heard from her father from a distant city where the child died of recurrence. A case of sarcoma of the lung showed no clinical improvement after three deep therapy doses. An osteogenic sarcoma of the os calcis in a girl of 17 was excised and prophylactic deep therapy given. The patient is now under observation with no sign of recurrence.

Carcinoma: The value of X-rays in the treatment of cases of malignancy may be strikingly demonstrated by referring to the recent statistical report of Portmann at the Cleveland Clinic wherein he tabulates his observations on the results obtained by various forms of treatment of 345 cases of cancer of the breast. According to his tables the average, natural duration of carcinoma of the breast without either surgery or X-ray treatment was 34 months. Of those cases treated by surgery alone 21% survived five years or longer without recurrence or metastasis. On the other hand, of all cancer patients treated by surgery and followed by deep X-ray therapy shortly after the operation 35% were in good health at the end of five years without any evidence of malignancy whatsoever. These figures are more or less typical of results obtained in the hands of radiologists throughout the country. The best routine treatment which I have followed closely consists of applying intensive deep therapy treatments before the operative wound has healed. This early post-operative therapy does not interfere with the closing of the wound. In this connection I may mention that several cases have been referred to me for post-operative X-ray therapy in which too great a time had elapsed from the date of operation and recurrence of the tumor or metastasis had already appeared. Hence, it is paramount that the surgeon impress upon the patient the necessity of immediate treatment in order that the patient may derive the most benefit from the operation and the X-ray combined.

In all malignancies careful calculation of dosage is of vital importance, as too intensive treatments tend not only to break down the resistance of the tissues directly irradiated but the adjacent and subjacent structures treated may be unfavorably influenced, producing anemia and cachexia. On the other hand, sufficiently penetrating rays should be employed to bring about the destruction and absorption of the malignant cells lurking in the deeper lymph channels. I make use of voltages of 190 to 200 kw., divided fields, long focal skin distance, filtration through copper and aluminum, for short periods but frequent intervals, thus avoiding roentgen sickness.

There were thirty cases of carcinoma divided as follows: carcinoma of the lower lip, 3; of the breast, 11; neck, 2; of the ovaries, 3; uterine cervix, 7; penis, 2; prostate, 1, and rectum, 1. Two cases of carcinoma of the breast were far advanced, both being deeply infiltrated, indurated and scirrhous. Deep therapy was given as a palliative measure and both were free from pain until the time of their death. Nine patients received post-operative deep therapy and have shown no evidence of recurrence or metastasis to date. Of the two cases of carcinoma of the neck, one was entirely relieved by excision and deep therapy. The other was too far advanced to be influenced by the treatments. In carcinoma of the lip, excision and deep X-rays combined give the best results. Of the three cases, one was too advanced for surgery. The second case was of a young man of 18 who noticed the growth, the size of a match-head, two months previous to admission to the hospital. A wedge-shaped section was removed and subjected to biopsy, revealing an early cancer of the lip. Four deep X-ray treatments were given to the neck. There has been no recurrence to date. Ovaries were involved in three, two being far advanced, the third having undergone complete oopherectomy. To the first two, X-rays were given for the relief of pain with marked temporary success, and to the third as a prophylactic measure. Of the seven cases of carcinoma of the cervix uteri, one was too far advanced, the remaining six had had hysterectomy done. In three there was recurrence from six months to a year from the operation. Two had received radium prior to the operation. Deep X-rays combined with radium give the best results with respect to recurrence or metastasis. Two cases of cancer of the penis were far advanced and were not influenced by the X-rays except in a palliative way. One case each of cancer of the prostate and rectum were likewise treated for relief of pain.

In conclusion, it can not be too strongly emphasized the importance of close co-operation between the surgeon and radiotherapist to secure the most benefit to the patient. Early surgery in carcinoma of the breast, followed by post-operative, prophylactic deep X-ray therapy promises results not to be secured by any other means. In late and advanced cases of carcinoma deep X-ray therapy should be regarded and used as a palliative measure, to avoid disappointment to the patient and disrepute to the value of radiotherapy.

DIVERTICULOSIS AND DIVERTICULITIS OF THE COLON*

JOHN A. HERRING, M.D.,
St. Petersburg.

Within the last three years in my routine X-ray examinations, I have found nine cases of diverticulosis and diverticulitis of the large intestine. In practically all of these diagnoses have been made solely on the roentgenological findings, and without any previous suspicion as to the cause of the patient's symptoms. The diagnosis of duodenal or gastric ulcer, chronic gall-bladder disease, chronic appendicitis, intestinal indigestion, any or all, had been made. One case from out of town, having been treated for two years for "cancerous obstruction" of the lower bowel—the diagnosis of a chiropractor, with the Abrams' method,— decided that his adjustments, 90 in all, were not having the desired effect, and that he would try elsewhere. It is such cases as these, which go undiagnosed for a long time, that lead me to believe that we could discover more cases by careful and complete routine gastro-intestinal examinations.

In considering the incidence of diverticulosis, Alexander Moore[1], of the Mayo Clinic, states that it is discovered in about 5% of the patients examined with the Roentgen-ray at the Clinic and that these cases constitute a third of all cases in which there are roentgenologic abnormalities of the colon. Case, of Battle Creek, in 1924, reports that 1 in 80, or 1.2% of routine examinations disclose colonic diverticula. So you can see what we are probably missing in the way of diagnosis, if we fail to make the concluding phase of the gastro-intestinal examination—the study of the colon—more or less routine. One great reason that we do not, is that the examination is technically more difficult or that previous preparation has not been complete. A thoro cleansing of the colon is essential.



FIG. 1. Typical findings diverticulitis. Mass felt in lower left quadrant. Patient died three years after diagnosis with acute obstruction.



FIG. 2. Diverticulosis. No symptoms.

The earliest examinations were made with the barium meal and it is still useful in special instances, but as a routine the enema is far superior and more informative. In the older method, exposure showed the meal dispersed and scattered thruout the bowel at different intervals and at different times. In order to study the entire colon, repeated examinations were necessary which were an undesirable risk to the patient and examiner. Again in obstructive lesions, impactions above the stenosis might add to the complications. On the other hand, the enema can be completed in a few minutes; the bowel can be

*Read before the Pinellas County Medical Society, Feb. 22, 1929.



FIG. 3. Diverticulitis. Mass formation. Note ragged appearance of the sigmoid.

observed thruout its entire course and if obstruction is present, it can be stopped at once.

Diverticula occur in every part of the alimentary tract but are most frequently found in the distal half of the large intestine. The roentgen diagnosis of the condition has been developed and worked out during the last ten years especially by Carmen, who devotes an interesting chapter to it in his book. They are divided into two classes: (1) congenital, (2) acquired. Only the second classification is usually considered because the congenital type is practically never seen in the colon. The pathologist describes it as the false, or incomplete type; that is, it is a hernia of the mucosa, thru the muscularis, commonly at points where the latter is penetrated by blood vessels, and is found in all parts of the colon, varying all the way from 1 to 300, or more. The chief causes are: the weakness of the muscularis with increase in intra-intestinal pressure, such as might occur in stasis; gas formation and possibly severe straining. These lesions may vary in size from 2 m.m. to 5 c.m. in size. They are usually round or ovoid, often sessile, and occasionally pedunculated. The sacs usually contain fecal material and sometime fecaliths. Histologically, the sac wall is made up of mucosa, submucosa, and serosa, the muscularis being slight or wanting. The mucosa may be slightly atrophic or even ulcerated but the most constant pathologic process is the chronic proliferative extramucosal inflammation—the peridiverticulitis of Wilson—with round cell infiltration, which results in mass formation.

The prominent features of the symptomatology, as described by Griffin and Carmen, are the following: "The proportion of males to females appears to be 2 or 3 to 1. An inclination to obesity is noted almost without exception. The patients are of sound flesh with good color, and where loss of weight occurs, it is only slight. Abdominal pain, usually of considerable severity, is the rule. Often the patient is able to localize the pain in the sigmoid or descending colon. Constipation is complained of by the majority and is often of more than moderate severity. Vesical symptoms, such as urinary frequency and tenesmus, are occasionally noted. In every instance of diverticulitis of the sigmoid, a mass was felt in the lower left quadrant or in the pelvis. The proctoscopic examination is likely to be negative unless the tumor has intussuscepted into the rectum. Absence of blood from the stools is notable and this is explained by the fact pointed out by Wilson that the inflammatory process is primarily extramucosal, and the condition is really a peridiverticulitis.



FIG. 4. Carcinoma descending colon. Proved at operation. Mass formation, canalization, and filling defect. Differential diagnosis here, apparent.

"In the presence of these symptoms the differential diagnosis becomes a matter of importance. One condition which must be eliminated is that of left sided appendicitis. Here the roentgenologic examination would be decisive by showing the position of the secum. The most difficult differentiation is from carcinoma. While the symptoms are not typical of carcinoma, they do not absolutely exclude it, unless spasm and extraluminal shadows are present during the examination. In some cases, however, this differentiation can hardly be made roentgenologically, for Wilson has shown that carcinoma may develop on diverticulitis. Furthermore, this differentiation is rendered difficult by such complications as perforation, abscess formation, obstruction, fistulæ, peritonitis, adhesions, etc."[2]

BIBLIOGRAPHY.
1. Alexander Moore: Jour. A.M.A., Oct. 13, 1928.
2. R. D. Carmen, "The Roentgen Diagnosis of Diseases of the Alimentary Canal."

VOMITING OF PREGNANCY

J. B. Brinson, Jr., M.D.,
Monticello.

The most distressing condition of early pregnancy, is vomiting coming on during the second month. About 60% of women vomit during pregnancy, but pernicious vomiting is comparatively rare. As the months pass its appearance is less probable; when, however, it begins early, it may last until term. Usually its duration is from a few days to the fifth month. Nausea and vomiting occurring after the fifth month often indicate preeclamptic toxemia, nephritis, or some intercurrent or complicating disease.

The cause of vomiting of pregnancy is unknown. There are many theories of this condition. Some believe it is a carbohydrate deficiency, deranged metabolism, endocrines, fetal and placental toxins, auto-intoxication, malfunction of the liver, etc.

The theory of the liver involvement is that large amounts of glycogen are lost by the liver, and liver function will be impaired and the system will be flooded with toxins.

Some divide vomiting of pregnancy into three types, neurotic, reflex and toxemic. Whatever the causes or types, the symptoms of headache, insomnia, mental agitation, depression, epigastric pain, constipation, thirst, dehydration, urinary and blood changes, etc., are all due to, or dependent, on the vomiting. If we can control the vomiting, of course we can cure the patient.

Some cases desiring an abortion complain a great deal of the nausea and vomiting, and weakness. These cases are not as ill, and do not vomit as much as they would try to lead us to believe. As soon as they are disabused of that idea and that under no circumstances will an abortion be done, they will improve and soon get well.

The treatments for vomiting of pregnancy are numerous. The treatment of the milder cases is rest in bed, quiet and no company, small meals several times a day, consisting mainly of carbohydrates, such as crackers, toast, brittle chocolate, dates, baked potatoes, stewed fruits, and fresh vegetables with plenty of water.

The bowels must be kept open by enemas once or twice a day.

If laxatives are used give milk of magnesia or effervescent sodium phosphate.

Adrenalin 3 to 5 minims is given by hypodermic every 3 hours for a few doses if possible; if not, 10 to 15 minims in water by mouth. Corpus luteum or ovarian extract is given daily intramuscularly; bromide of soda by mouth and luminal at bed time if patient can not sleep.

In the more severe cases, Murphy drip is used, 1000 cc. of 5% glucose and one-half of one per cent sodium bicarbonate, once each day. After this is given one may inject 5 to 10 units of insulin or if patient is very nervous give 60 grains of bromide of sodium by enema.

If patient does not improve from this procedure, and in the pernicious types of vomiting, 25 grams of glucose in 200 to 500 cc. of freshly double distilled water may be given in the vein. Give one unit of insulin for each 3 or 4 grams of glucose. The glucose solution must be given very slowly and should be warm. If freshly distilled water can not be obtained, it is best to give the ampules of glucose which are 50% solutions in 50 cc. ampules. In giving insulin always have a glass of orange juice at hand.

In the pernicious type, if in 5 or 6 days of active treatment the vomiting does not cease, termination of labor is advised. If we wait for extreme signs and terminal symptoms such as turning yellow, seeing double, show of albumen and casts, acetone and diacetic acid in the urine, then interference with pregnancy will generally be followed by death of the patient.

The best place for patients suffering from vomiting of pregnancy is in the hospital, but the great majority of the patients in our section will have to be treated at home.

APPROVED HOSPITALS OF THE FLORIDA MEDICAL ASSOCIATION, INC.

The House of Delegates of the Florida Medical Association during its last meeting unanimously voted to adopt a standard for a "List of Approved Hospitals" to be published annually in its Journal, also in the annual report of the Florida Hospital Association.

Standardization has proven of the greatest benefit to hospitals, but up to the present time the small hospital, of less than twenty-five beds, has been denied participation in these benefits.

The public is rapidly awaking to the privilege, as well as the protection, of being cared for in a standardized hospital and each year finds greater numbers demanding this type of service.

A failure to appear on some approved list is almost an admission of hospital's inability to render standardized service which is the right of the patient seeking intelligent treatment.

Every hospital in the State now approved by the American College of Surgeons or the American Medical Association will automatically be placed on this "Approved List." The Committee desires that no confusion arise regarding the *Directory* of the American Medical Association. Being listed in this *Directory* and being on *"The Approved List for Interns"* of the American Medical Association are entirely different. The following former list has nothing to do with standardization.

The Association desires that every hospital in the State be accorded an opportunity to appear on this approved list. It is, therefore, requested that its members aid in spreading this information. The Hospital and Medical Education Committee has exhausted every means at their disposal to obtain the name of every hospital in the State. Each one of those not now standardized will receive a copy of the "minimum requirements" set forth by the Association; also a letter urging compliance and offering the aid of the Committee or its individual members in building up to the required standard. Should any hospital fail to receive this information it will be due to ignorance of its existence and a favor will be conferred by notifying some member of the Committee.

Activity of the Hospital Committee last year met with a very friendly cooperation and many additional hospitals were able to comply with the minimum requirements of the American College of Surgeons and a few were added to the "Approved List for Interns" of the American Medical Association. It is our desire to greatly extend this valuable work and if possible help in obtaining public recognition for every hospital desiring to do good work and render standardized service.

The minimum requirements recommended and adopted by the Executive Committee of the Association are:

1. That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff.
2. That membership upon the Staff be restricted to physicians and surgeons who are (a) full graduates of medicine in good standing and legally licensed to practice in this State; (b) competent in their respective fields; (c) worthy in character and in matters of professional ethics—that in this latter connection the practice of the division of fees, *under any guise whatever*, be prohibited; (d) members, in good standing, of their County Medical Society and the State Medical Association.
3. That staff meeting be held at least once each month; each staff member being required to be present at 65% of the total annual staff meetings; (b) clinical experiences in the various branches—such as medicine, surgery, obstetrics and the other specialties, *taken from hospital cases*, be reviewed and analyzed. Cases of death and those discharged *unrelieved* should receive special attention.
4. That accurate and complete records be written for all patients and filed in an accessible manner in the hospital—a complete case record being one which includes identification data; complaint; personal and family history; history of present illness; physical examination; special examinations—such as consultations, clinical laboratory, X-ray and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings.
5. That diagnostic and therapeutic facilities, under competent supervision, be available for the study, diagnosis and treatment of patients, these to include, *at least*, (a) clinical laboratory providing clinical, bacteriological, serological and pathological service, (b) X-ray department providing radiographic and fleuroscopic service.

JOHN E. BOYD, M.D., Jacksonville, Chairman.
JOHN S. HELMS, M.D., Tampa.
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Hospital and Medical Education Committee

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DON'T FORGET THE MEETING OF THE SOUTHERN MEDICAL ASSOCIATION AT MIAMI, NOVEMBER 19-22.

DR. HENRY HANSON

State Health Officer

Four years ago this month Dr. Arms was officially welcomed as State Health Officer. Although not an applicant for the office, Dr. Arms was requested by the State Board of Health to assume the duties of State Health Officer and has untiringly served the people of Florida in that capacity during a full term. On September 15th of this year, Governor Doyle E. Carlton announced that Dr. Henry Hanson would be the State Health Officer to succeed Dr. B. L. Arms, resigned.

The new health officer is a native of South Dakota and is 52 years of age. He was graduated from the University of South Dakota with a degree of bachelor of arts in 1902 and for the

next two years served as laboratory assistant in inorganic chemistry at that university, and continued post-graduate studies for which the degree of master of arts was later conferred upon the presentation of a thesis. He entered Johns Hopkins University in 1904 and graduated with a degree of doctor of medicine in 1908 and immediately was appointed assistant superintendent and pathologist of the Milwaukee County Hospital, at Wauwatosa, Wisconsin, and later in the same year was named as associate pathologist to the medical department, Marquette University, Milwaukee, Wisconsin. The following year he was named professor of clinical microscopy in the College of Physicians and Surgeons, Milwaukee.

In December, 1909, Dr. Hanson was called to Florida to take charge of the State Board of Health laboratory in Jacksonville and he continued as bacteriologist until May, 1916, and during the period served a term as president of the Duval County Medical Society, 1913-14. During his term of office with the Board he was also a member of the St. Luke's Hospital staff and of the Duval County Hospital staff and was consulting pathologist to the Hospital for the Insane, Chattahoochee.

After his resignation from the Board in May, 1916, he took up private laboratory work with offices in the Professional Building, Jacksonville, and continued in that capacity until the outbreak of the World War when he was commissioned as captain in the medical reserve corps and ordered into active service in June, 1917, being assigned to the Panama Canal government where he first had brief services in the Ancon Hospital and then became acting chief sanitary inspector, later chief, and finally assistant chief health officer to the Panama Canal.

Promoted to the grade of major in March, 1918, Dr. Hanson continued with the Panama Canal government until he was requested by the Peruvian government to make a sanitary survey of the coast of Peru, with special reference to the malaria problem. This survey was undertaken but was interrupted within a month by an outbreak of an epidemic of yellow fever in northern Peru, in the department of Piura; Dr. Hanson being rushed into the territory to take charge. During the investigation he contracted yellow fever and found it necessary to obtain leave to convalesce, but returned to the district in January, 1920, to resume charge of the yellow fever campaign. He also took over the direction of the fight against the bubonic plague epidemic which was sweeping the port of Paita and other towns of northern Peru and continued in the plague and yellow fever campaign until March, 1921, when the seriousness of the yellow fever epidemic necessitated his giving up all other activities.

In March, 1922, he became director of the national health department of Peru and served in that capacity until he left the country in July of that year. He returned to the States at that time and took a post-graduate course in the School of Hygiene and Public Health, Johns Hopkins University.

He returned to South America in June, 1923, as director of yellow fever control activities in Colombia for the Rockefeller Foundation. He continued there until July, 1924, when he was requested by the Foundation to investigate an outbreak of yellow fever in Salvador of Central America and take temporary charge of control measures. He returned to Colombia in December of that year and in January, 1925, initiated a yellow fever survey in Venezuela, which was continued for a period of five months.

He returned to the States and made ready for services with the West African Yellow Fever Commission. He proceeded into Nigeria, West Africa, and served there for eighteen months, returning to the States in May of 1927.

His love of Florida drew him again to the Land of Flowers and he joined the State Board of Health service as district health officer for western Florida with headquarters at DeFuniak Springs during the high water periods of last year and the early part of this year. He came to the Jacksonville City Board of Health in June and his efforts as director of sanitation, particularly in the control of mosquito breeding, have met with statewide commendation.

Dr. Hanson is a member of the Beta Theta Pi collegiate fraternity and is also a Phi Beta Kappa man. He was a member of the Academy of Sciences in Lima, Peru, and is a member of the American Public Health Association, American Society of Tropical Medicine, and the American Geographical Society. He is a Mason and prominent in Scottish Rite activities. He is licensed to practice medicine in Wisconsin and Florida.

To the State Health Officer of Florida we extend greetings, confidence, and our cordial good wishes for a successful administration.

THE ASSOCIATION LIST OF APPROVED HOSPITALS

At the last meeting of the Florida Medical Association, it was unanimously voted to adopt a standard for a list of approved hospitals, to be published annually in the Journal. The requirements to be met were to be determined by the Hospital and Medical Education Committee, a list of which have been submitted to the Executive Committee and duly approved.

The Committee have already begun their investigation of the various hospitals in the state with the idea of determining whether or not they meet the requirements. It has been made possible for the smaller hospitals of twenty-five beds and less to meet the standards set up by this Committee. At the same time, the committeemen, who are thoroughly versed in hospital administration, will make every effort to help the smaller institutions in bettering their administrative and scientific work. We are positive that all of the small institutions, as well as those institutions already standardized by the American Medical Association and the American College of Physicians and Surgeons will lend every effort to cooperate with this most important work of the Association. On page 173 of this issue will be found the full text of the report of the Committee on Hospitals and Medical Education.

STATE NEWS ITEMS

United States Civil Service Commission, Washington, D. C., makes the following announcement of open competitive examination for Federal civil service for those who may be interested. Announcement Number 188, United States Veterans' Bureau, physician $3,800.00 a year, associate physician $3,200.00 a year. Applications will be rated as received by the United States Civil Service Commission at Washington, D. C., until December 30, 1929. Announcement Number 193 is for Associate Medical Officer and Assistant Medical Officer; associate medical officer, $3,200.00 a year, assistant medical officer, $2,600.00 a year. Applications will be rated as received by the United States Civil Service Commission at Washington, D. C., until December 30, 1929. Any members wishing to apply should communicate with the United States Civil Service Commission, Washington, D. C., and refer to the number and title of the announcement as given above.

The State Board of Health was well represented at the recent meeting of the American Public Health Association at Minneapolis. Dr. Henry Hanson, State Health Officer, became a member of the State Health Officers' Section and as chief executive for the State Board of Health gave a good account of himself as he associated with the state health officers from different parts of the United States and Canada. Dr. F. A. Brink applied for membership in the newly formed section for epidemiologists and attended the meetings and conferences in connection with this phase of the work. Mr. E. L. Filby for a member of the State Health Officers' Section and gineering Section and was exceedingly busy attending meetings and conferences with reference to engineering problems. Dr. Stewart Thompson, who for many years has been a Fellow of the Association and appointed to the chairmanship of the Section on Vital Statistics for two successive years, read a paper before that section at the Wednesday morning meeting. Each year brings new discoveries in the science of numbers which seem to be appreciated by every other department in preventive medicine. The regularity with which the Florida Bureau of Vital Statistics has been represented at these international meetings has been a factor in the place of recognition it holds at the present time.

JOHN McGREADY OGLESBY

Dr. John McGready Oglesby was born in Maine Sept. 1, 1885; he died at Bartow, Fla., April 6th, 1929, after a lingering illness.

He graduated in 1880 from Washington University of St. Louis, Mo., and moved to Bartow, Fla., in 1887, where he practiced until shortly before his death.

Dr. Oglesby was public-spirited and held many positions of honor and trust. He was an ex-president of the Polk County Medical Society, vice-president of the Polk County National Bank, president of the City Library Board, of the Home Building Company, Surgeon for the A. C. L. Ry. Co., an officer in various Masonic Orders, and an elder in the Presbyterian church.

Dr. Oglesby married Miss Eva Gittings. There were five children, one of whom, Dr. Knowles G. Oglesby, was killed in the World War.

He was a kind and liberal physician and benefactor and was deeply loved by the entire community.

Dr. J. N. Tolar of Sanford has just returned from Atlanta where he went to meet his family who were returning from a summer's vacation in California.

* * *

The Christine Roof Memorial Hospital of Bradenton closed its doors September 14th, Dr. John R. Boling, surgeon in charge, having located in Tampa.

* * *

Dr. and Mrs. Davis Forster of New Smyrna have just returned from a two months' travel and study trip to the British Isles.

* * *

Dr. Harry F. Watt of Ocala has recently returned from a two months' sojourn in Europe, having visited many foreign clinics. On returning, he spent two weeks in clinical work in New York and Chicago.

* * *

Dr. J. E. Garner of Wauchula has located in Thomaston, Ga.

* * *

Miss Frances Jane Foxworthy, daughter of Dr. and Mrs. F. W. Foxworthy of Miami Beach was married to Dr. William E. Kennedy of the Bellevue Hospital staff on September 14th at "The Little Church Around the Corner", New York City. They will live in New York.

* * *

Dr. Maurice E. Heck, who has spent the summer in Bushkill, Pa., has returned to Miami and recently opened his office there.

* * *

Dr. Joseph Halton of Sarasota has spent several weeks in Boston where he took post-graduate work.

* * *

Dr. M. Mallory of Orlando made the principal address at the graduation exercises of the Nurses' Training School of the Orange General Hospital on September 23, 1929.

* * *

Dr. A. W. Knox of Sanford is spending his vacation in Canada.

* * *

Dr. N. L. Spengler of Tampa was a guest at the regular monthly meeting of the Marion County Medical Society recently. Dr. Spengler rendered an excellent paper entitled "Intravenous Treatment of Malaria."

* * *

Dr. C. H. Field of Bradenton announces the removal of his office to Marietta, Ga.

Dr. W. McL. Shaw, Jacksonville, has returned from a trip north. While away Dr. Shaw attended the annual meeting of the American Roentgen Ray Society which met in New York City this year.

* * *

The Florida East Coast Railway Hospital at St. Augustine was recently commended for its work by the American College of Surgeons. This commendation followed a thorough inspection by a field representative of the College.

* * *

The Thirtieth Annual Meeting of the American Roentgen Ray Society which was held in New York City September 17th-20th was well attended this year by the Florida Roentgenologists.

Among those present from this State were Drs. Harold O. Brown, Clearwater; Elliott M. Hendricks, Ft. Lauderdale; Jos. H. Lucinian, Miami; F. K. Herpel, West Palm Beach; J. C. Dickinson, Tampa; and W. McL. Shaw, Jacksonville.

The meeting this year was featured by Clinics at Mt. Sinai Hospital, Memorial Hospital, Fifth Avenue Hospital, and the new Medical Center. These clinics dealt with problems in both X-ray therapy and diagnosis.

* * *

Dr. W. A. Claxton, who, from time to time has been connected with the State Board of Health, has returned to serve as District Medical Officer in the lower East Coast District. His headquarters are at Melbourne.

* * *

The City of Tampa contemplates the opening of a hospital for its colored citizens very soon.

* * *

At a recent meeting of the Hillsboro County Medical Society, Dr. R. C. Hubbard presented a most interesting and instructive paper on "Pellagra." At the same meeting a committee consisting of Drs. John S. Helms, Earl McRae, and J. J. Saxton was appointed to meet with the County School Board for the purpose of discussing the program of physical examination of school children. A committee consisting of Drs. H. Mason Smith, R. C. Hubbard and C. A. Andrews was appointed to appear before the Board of County Commissioners to request that provision be made for a City Health Officer.

(*Continued on page* 178)

SOUTHERN MEDICAL ASSOCIATION MEETING, MIAMI NOVEMBER 19-22, 1929

Dr. J. C. Pate of Tampa has recently returned from New York where he has been doing post-graduate work.

* * *

Dr. Wm. McKibben of Miami recently returned from the Southern Pediatric Seminar held at Saluda, N. C. He reports that the Seminar was very well attended and a most interesting program was held.

* * *

Drs. W. C. Payne, J. M. Hoffman, H. L. Bryans and M. A. Lischkoff of Pensacola were among those present at the opening of the Atmore, Ala., hospital.

* * *

Dr. and Mrs. E. C. Aurin of Ft. Ogden have just returned from a five thousand mile trip through the northern states and parts of Canada.

* * *

The marriage of Dr. H. B. Haisfield to Miss Ruby Jackson of Miami took place August 9, 1929.

* * *

Dr. E. T. Craney of Orlando has returned from a four months' vacation. During this period, he spent much of his time in the Philadelphia clinics.

* * *

Dr. W. P. Dickinson of Lakeland has entered the hospital at Oteen, N. C., for treatment. Dr. Dickinson will probably be confined for several months and would appreciate a visit from his friends when in Asheville or elsewhere in Carolina.

* * *

The Pinellas County Medical Society held its regular meeting at St. Petersburg September 20th. Clinical cases and post-graduate reports constituted the scientific program.

* * *

Dr. H. A. Day of Orlando is spending several weeks at his old home in Rogersville, Tenn. He will also visit clinics in Knoxville and Cincinnati.

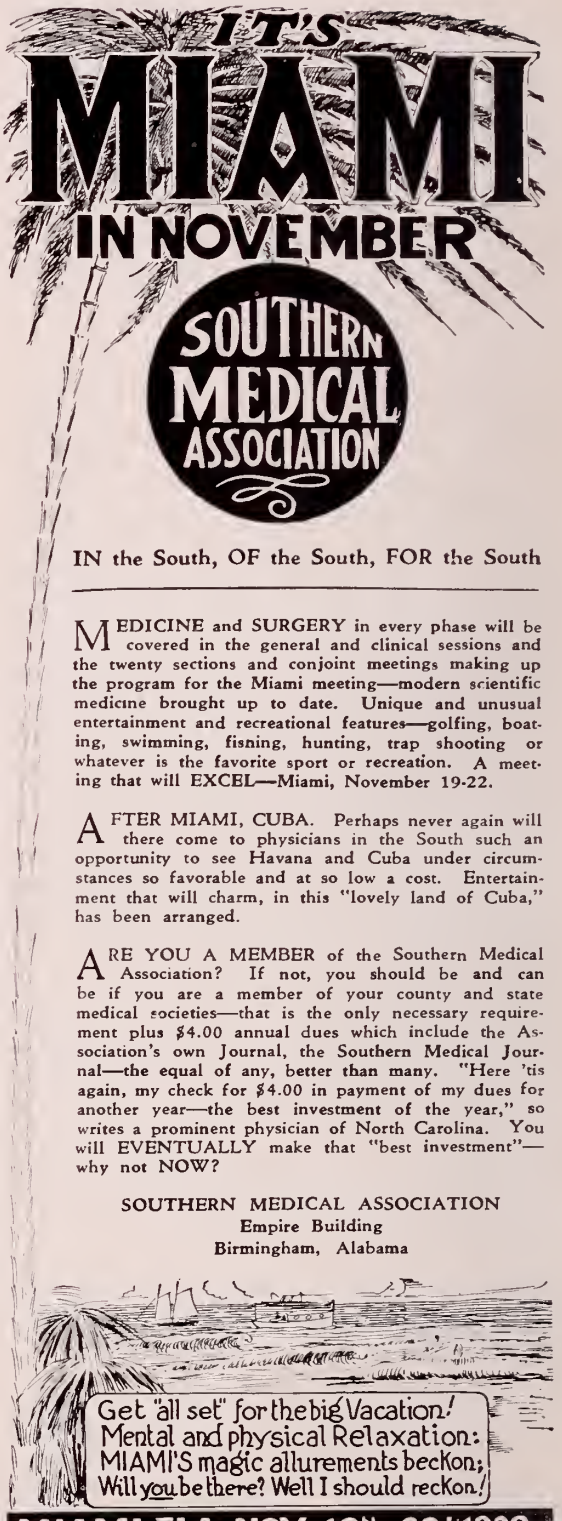
* * *

Dr. W. M. Rowlett of Tampa has resumed his practice after spending several weeks attending clinics in New York and Boston.

* * *

Drs. J. W. Taylor, John S. Helms, Leland F. Carlton and R. R. Duke were among the Florida doctors who attended the meeting of the American College of Surgeons held at Chicago recently.

(*Continued on page* 180)



COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	92%
Bay	J. M. Whitfield, M.D., Panama City.					64%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		71%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	70%
Columbia.....	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	68%
DeSoto-Hardee-Highlands ...	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	100%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	86%
Escambia	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	71%
Hamilton	R. A. Barnett, M.D., White Springs.					100%
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	76%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	56%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	93%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	82%
Leon-Gadsden-Liberty-Wakulla-Jefferson	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	71%
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	95%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	100%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	83%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	90%
Pasco-Hernando-Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	96%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	72%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	75%
St. Johns	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	64%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	85%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		83%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	60%
Suwannee	W. C. White, M.D., Live Oak.					86%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	92%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-Holmes	W. C. Harper, M.D., Chipley.					100%

NOTE—Secretaries: Please submit information to complete the above schedule.

Dr. and Mrs. F. A. Vogt and son of Miami are spending some time in Atlanta and New York.

* * *

Dr. R. D. Newton of Ft. Myers, who has been spending some time in the north, has returned to Ft. Myers and will resume his practice.

* * *

Dr. Frederick Bowen of Jacksonville has returned after having enjoyed a 9,000-mile trip through the country. Dr. Bowen traveled 2,400 miles by air.

* * *

Dr. J. W. Williams has left Tampa to accept a position as instructor in the Medical School of Tulane University.

* * *

Dr. W. P. Adamson, Tampa, who recently returned from the American Medical Association meeting in Portland, Oregon, gave an interesting account of the convention at a meeting of the Staff of the Tampa Municipal Hospital on September 12th.

* * *

Dr. J. M. Davis, formerly of Bradenton, has located in Tampa with offices in the First National Bank building.

* * *

Dr. E. C. Tumlin of Miami has just returned after six weeks spent in the clinics at the New York Post-Graduate Hospital and Johns Hopkins.

* * *

Dr. Frederick K. Herpel of West Palm Beach recently attended the Thirtieth Annual Meeting of the American Roentgen-Ray Society held in New York City. He spent the months of August and September in the north visiting various hospitals and clinics.

(*Continued on page* 182)

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Park Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

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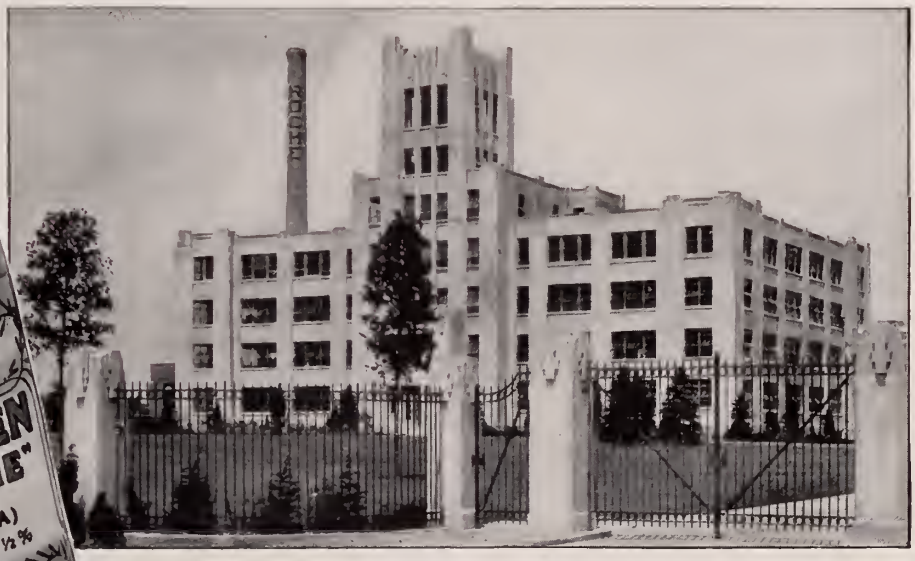
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NUTLEY, NEW JERSEY

Dr. L. S. Oppenheimer of Tampa submits the following jingle which we feel is well worthy of our columns:

HOPE FOR THE SUFFERING.

In ye citie yclept Tampa, of olde There dwelt some goode Doctors so ethically bolde. They ate, drank and breathed Ethics, I'm tolde. Thus, a patient who had a very bad colde, with chests said to be lined with plausible golde, Sent post haste for a bunch of the folde To save soul and body from running to moulde.

Each one was a Specialist full trained to cope With one single organ, and let others lope. One punched with phonendoscope, Another did puncture him with ureteroscope; One tickled one end with laryngoscope, Another the other end with long proctoscope. So, when the wise faculty had general scope They retired to consult, and to smoke or to mope, and discuss whether patient was real sick or nope, And by what route 'twas easiest to transmit the dope.

They started in spirit of fraternization, But soon lapsed to frivolous shady narration That never would, never should stand publication. So old Dr. Fossil in grand declamation Vowed that his dignity had suffered a great degradation In consulting or having an affiliation With fool doctors who took their own medication, or in self-exaltation paraded before the whole nation in daily red journals, and made dernation Fuss o'er some grand (sic) operation.

Then Dr. Kode, of Ethics, rose with most majestic studied pose, Slipped his goggles down his nose, And vowed he'd heard one Medicose Had entered a conspiracy to froze A young M. D. out, so's He would find the eternal snows A hotter place than mortal knows.

The time these wasted was a sin. So when the Faculty all went in Where illness grave had lately been, The patient met them with a smile That savored of some wicked guile. He said "Gentlemen" (so they tell) "I've really gotten entirely well While you were gassing there like hell. So, to collect your bill, just go to—yon fiery place Where erstwhile patients you sent to space Await to meet you face to face."

And that patient now is sitting, memory flitting, splitting, Pondering o'er and o'er That dark night he came near flitting O'er the night's Plutonian shore And when asked for his permission To send for that physician Who came so durned near ending his life's mission, Quoth the Patient "Ich gebibble! aber nit." A TAMPA M.D.

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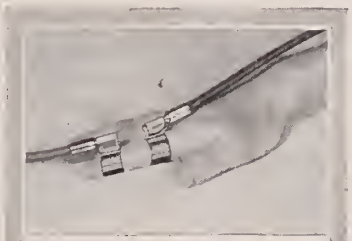
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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

For years, search has been made for some blood serum test that might indicate specifically the presence of tuberculous infection and that would vary consistently with different clinical or pathological stages of that infection. No reaction is yet known that satisfies both of these conditions. However, the tuberculo-complement fixation test, after several years of uncertain status, has at last been so technically perfected and standardized that it has a very distinct value. Dr. James Wynn of the Indiana University Medical School describes this and other serological tests for tuberculosis. While a detailed knowledge of serological technique is not necessary, an understanding of the principles underlying this test is essential for the clinician who would interpret it judiciously.



Paul Ehrlich (1854-1915)
Pioneer in Serology.

TUBERCULO-COMPLEMENT FIXATION

In tuberculous infection, the bacillary focus, acting antigenically through blood-stream absorption, tends to stimulate the patient's serum to the production of a thermostabile substance commonly referred to as reagin or amboceptor. This substance is highly specific for the antigen. In the presence of complement (a thermolabile substance present in any fresh blood serum, whether normal or immune), this reagin will combine with both antigen and complement. If a tuberculous suspect's serum is mixed, in the presence of complement, with an antigen specially prepared from boiled tubercle bacilli, the disappearance of complement from the mixture connotes antigen-reagin-complement union—which means that the suspected serum contained the tuberculosis reagin; *i. e.*, was positive. (This disappear-

(*Continued on page* 186)

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ance of complement is demonstrated, as in the Wassermann reaction, by mixture with a hemolytic system in which suspended erythrocytes are the antigen and serum hemolysin the reagin; if there is no hemolysis, it is clear that complement has been previously "fixed" by the tuberculosis reagin and the reaction is positive.) A quantitative technique and accurate titration of antigen make it possible to embody the foregoing immunological principles in a diagnostic test. It is necessary to parallel the test with the Wassermann reaction, since a positive tuberculo-complement fixation is of little significance in the presence of a positive Wassermann reaction.

Though in its earlier years tuberculo-complement fixation appeared to be of doubtful value, when skillfully performed the test now gives, within reasonable limits, distinctly reliable information. This demonstration of the test's true worth is due almost entirely to the work of such men as Petroff and Woolley in standardizing technique, antigen, etc.

According to Woolley, "With accurate technique, the reaction is positive in 60 to 80 per cent of cases, depending on the stage of the disease." Blood-stream absorption from the tuberculous focus is necessary to produce reagin production. And there must be sufficient absorption to stimulate an excess of reagin over the amount necessary to fix the lesion-produced antigen. (It is the failure of this excess which accounts for the low reagin curve in terminal stages of the disease.) It is apparent, therefore, that a positive reaction is of far from trivial significance and may be taken to mean activity in the sense that the focus is producing very definite systemic absorption. The fact that this absorption may be quantitatively insufficient to occasion symptoms or physical signs in a measure invalidates the test as an index to the extent of clinical activity. Nevertheless, a strongly positive and persistent reaction is very suggestive evidence of impending if not actually existent clinical activity.

On the other hand, in a patient with definite symptoms and physical signs pointing to active tuberculous disease, a negative reaction by no means excludes tuberculosis; for, as previously stated, the reaction measures merely the *excess* of blood reagin (which is occasionally nil, *e. g.*, in overwhelming or terminal infections). The real usefulness of the negative reaction is in differentiating tuberculosis from such conditions as bronchiectasis, certain forms of chronic bronchitis, and interstitial pneumonia.

(*Continued on page* 188)

Any one can make belts, but belts which give compression without uplift may do serious injury

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Pleases doctors and patients. Long laced back. Soft extension, low on hips. Hose supporters attached.

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For children, the initial dose should be doubled as the power of the body to neutralize snake venom is in direct proportion to the size of the victim. The smaller and lighter the child the more venom present in excess of tolerance requiring neutralization with Antivenin.

Antivenin is a concentrated serum supplied in 10 cc syringe with a needle and accessories all sterilized and ready for instant use.

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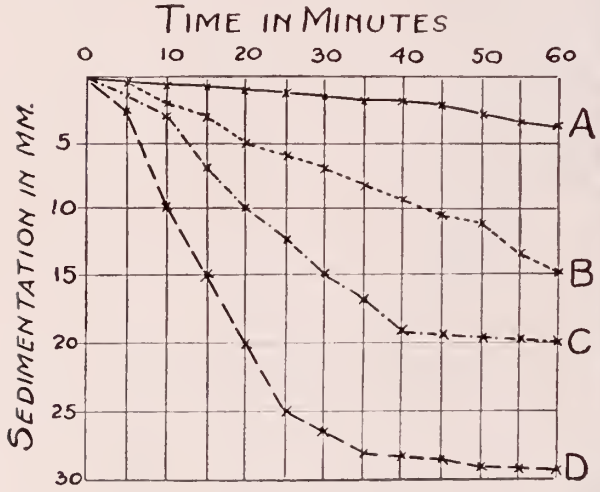
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CELL SEDIMENTATION TEST

Several other recently proposed serological tests for tuberculosis may be briefly mentioned. A definite relationship has long been recognized between certain physiological and pathological states and the rate at which the cells in citrated blood settle on standing. Westergren (1921) observed what he believed to be a diagnostic type of sedimentation in pulmonary tuberculosis. The test requires so little apparatus and technical skill that it can be performed by any careful physician. Of the various techniques in general use, many of the best features are incorporated in the method of Cutler (1929) which is as follows:



Cell sedimentation curves according to Cutler's method.
A. Normal.
B. Pulmonary quiescence.
C. Slight to moderate activity.
D. Moderate to marked activity.

After drawing 0.1 c.c. of freshly prepared sterile 3% sodium-citrate solution through a 20-gauge needle into a dry, sterile 2 c.c. syringe, a vein is entered and blood drawn to the 1 c.c. mark. The syringe is then tilted gently back and forth to avoid clotting, and the mixture promptly injected into a Cutler tube. (These tubes have an internal diameter of 5 mm. and are marked in millimeters, beginning with zero at the 1 c.c. level, increasing downward to 50.) The tube is tightly stoppered until ready for reading. Its contents are then thoroughly mixed and the level of the settling cells noted every five minutes for one hour. These data are graphed (with the time in minutes and the level in millimeters). Cutler has described fairly characteristic curves for normality, pulmonary quiescence, slight to moderate activity, and moderate to marked activity—the cell levels at 60 minutes for these groups being respectively 3, 15, 20, and 30 mm. Comparison of a patient's graphs from week to week

(*Continued on page* 190)



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is of distinct value in clinical management and prognosis. But the test is of little or no differential diagnostic value.

TEST FOR ANTIBODIES IN URINE

Assuming that in active tuberculosis antibodies would be eliminated in the urine; Wildbolz (1919) suggested that the urine of tuberculosis suspects might be tested for these by injecting concentrates of it into a known tuberculin-hypersensitive skin and comparing the cutaneous response with that occasioned by tuberculin controls. Lanz (1920) and Imhof (1920) applied fundamentally the same hypothesis to the development of a serum test. Numerous efforts to confirm these observations have led to an accumulation of statistical data that have thus far proved inconclusive.

FLOCCULATION TEST

The flocculation test of Daranyi (1922) is dependent on the fact that a substance (probably globulin) may be precipitated from a high percentage of tuberculous sera by an alcohol-salt solution mixture. Convincing evidence of its real diagnostic usefulness is lacking. Though positive in a very large number of advanced active cases, its value in picking up the early case of tuberculosis is practically nil.

PRECIPITIN TEST

Agglutinin and precipitin reactions in tuberculosis have been very largely abandoned, since a general lack of specificity has militated against any possible clinical application. However, Doan, working with a tubercle-bacillus fraction furnished him by Anderson, has described very recently (May, 1929) a precipitin test which is promising. Though still entirely in the experimental stage, the test is of more than ordinary interest; for, if critical study eventually proves its value, its simplicity of technique might conceivably bring it into very general clinical use.

COMMENT

From the foregoing, it is obvious that today, at least, serological methods are of comparatively minor importance in the diagnosis of tuberculosis. Even tuberculo-complement fixation merely furnishes confirmatory evidence for a diagnosis already made by the less technical but more fundamentally important means, such as the study of clinical history, physical signs, and sputum. In the words of Dr. Krause, "The laboratory diagnosis of the ordinary case of tuberculosis can be accomplished by simple methods in an ordinary physician's hands in an ordinary physician's office."

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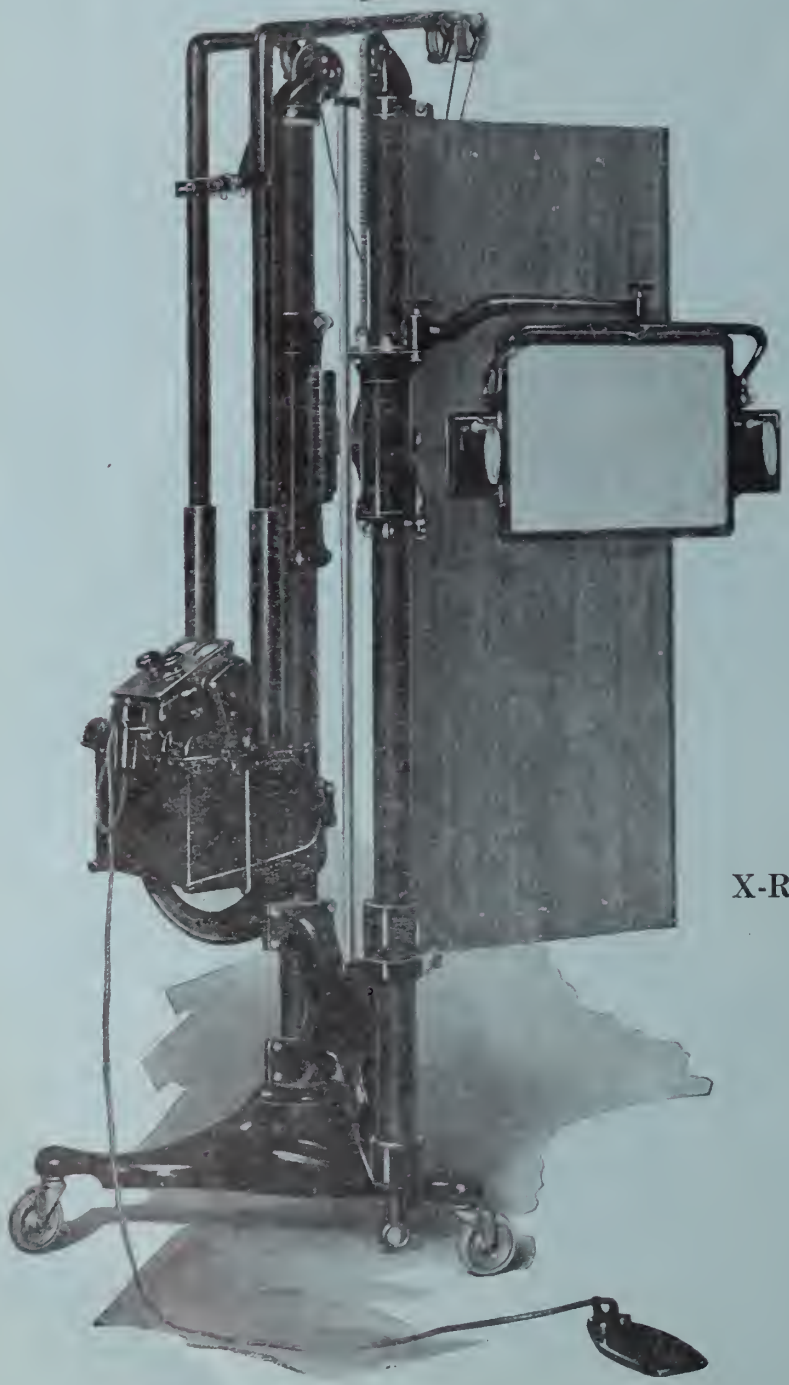
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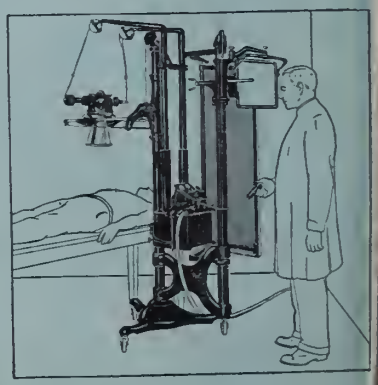
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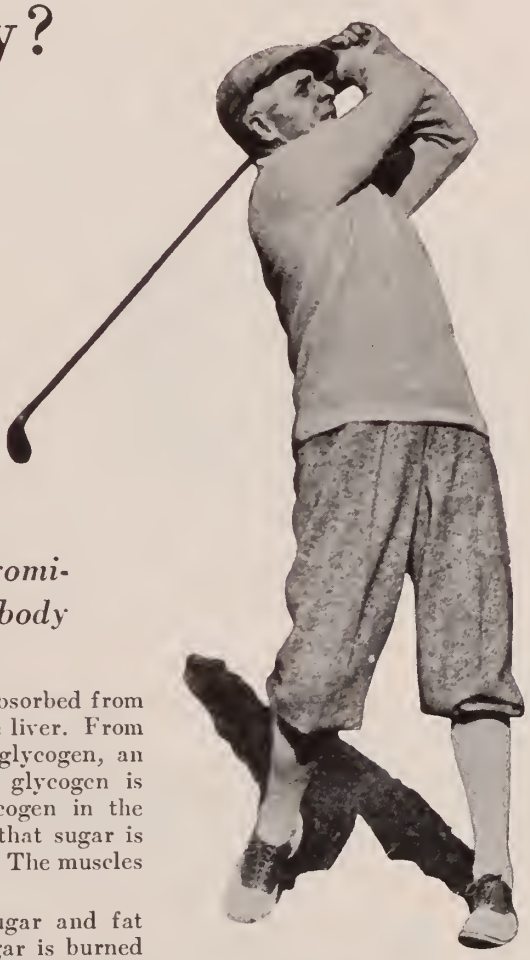
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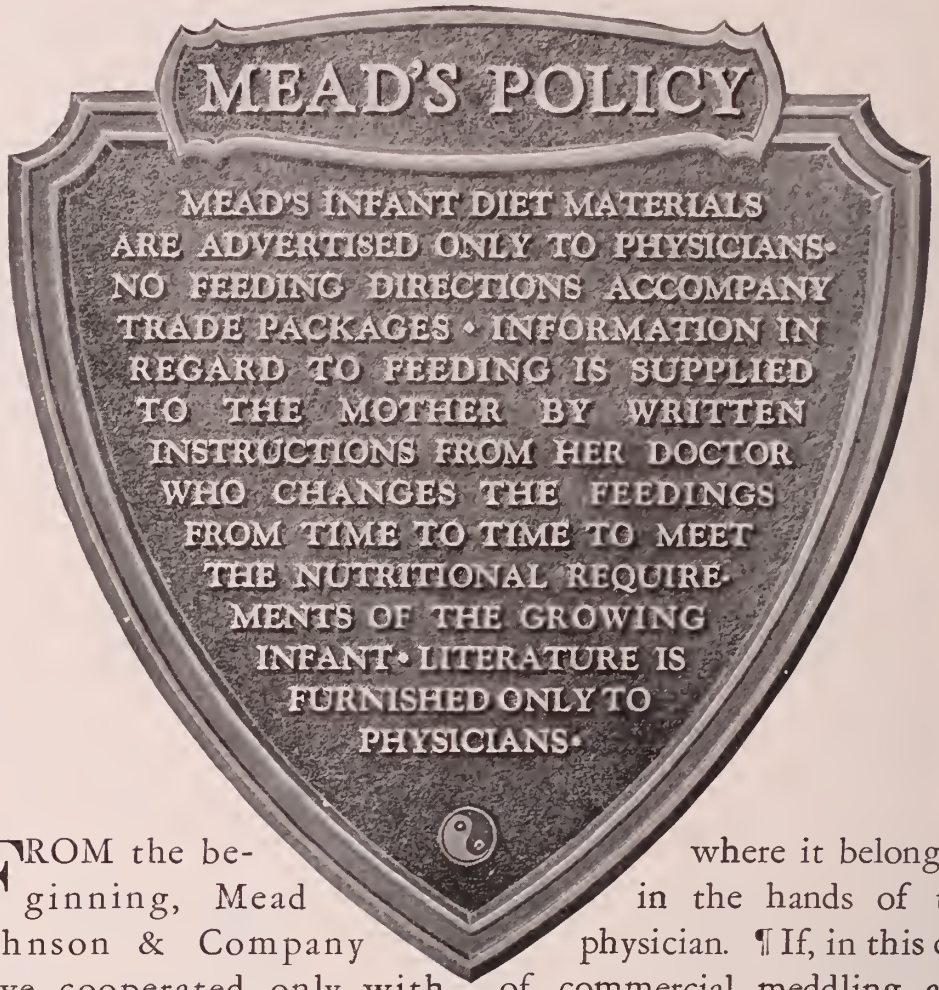






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THE FACTORS IN THE SUCCESSFUL FEEDING OF INFANTS AND CHILDREN*

W. E. Sinclair, M.D.,
Orlando.

No less an authority than the late Dr. Holt made the statement that nutrition in its broadest sense is the most important branch of pediatrics, yet no subject has been made more complex. During the last ten to fifteen years, little by little, facts have been brought to light, old ideas have been shattered, new ones readily accepted or looked upon with doubt; much controversy has existed and various schools of feeding established, such as the Boston School, Caloric Methods, Finklestein Methods, Von Pirquet Methods, percentage feeding, acidified milk feedings, and many more, each contributing valuable facts and essential knowledge. Much yet remains to be learned, but from the tireless efforts of nutritional research workers we are able to formulate proven practical and simple methods, knowing that we have the fundamentals of a well-balanced diet and one which will produce the maximum of growth and development of the children under our care.

The problem of feeding resolves itself into three important factors: (1) the essential foods; (2) the child; (3) the parents. Each of these is a link in the chain, and if one is weak, the chain is impaired in proportion.

To fulfill all the demands of nutrition and growth, the essential foods must consist of definite proportion of fat, sugar and protein, must contain sufficient calories for basal metabolism, growth, muscular activity and loss in excreta, must have an abundant supply of the important vitamins, and contain a sufficient amount of mineral salts.

The proportions of fat, sugar and protein as estimated by Holt and Fales are considered adequate for most children. They found that children on an ordinary American diet took 35% of their calories in the form of fat, 50% as sugar, and 15% as protein. These are felt to be the optimum proportions and approximate closely those of breast milk which is 50% fat, 40% carbohydrate and 10% protein.

The caloric needs of infants have been fairly definitely established as follows: The new-born baby requires 28 calories per pound body weight. The needs rise rapidly so that in the second and third weeks, 45 calories per pound are required; at two months, 55 calories and from then to the first year, decrease gradually to 45 calories. From the first to second year, there is a gradual decrease to 40 calories per pound. Exceptions to this rule are fat babies, active babies, and malnourished babies, the later requiring more calories, the first less calories.

Much difference of opinion exists as to the caloric needs of older children and numerous statistical tables have been prepared. Holt and Fales seem to strike a happy medium and their statistics taken from well-nourished American children are:

Boys.	
Five years	1500 calories
Eight years	2000 calories
Twelve years	2600 calories
Fifteen years	4000 calories
Girls.	
Five years	1400 calories
Eight years	1800 calories
Twelve years	2900 calories
Fifteen years	3300 calories

Foods containing the proper proportion of fat, sugar and protein and of sufficient caloric value are not complete foods and require the addition of the accessory food factors or vitamines; otherwise, serious disturbances of nutrition develop. The vitamines known at the present time are:

The fat soluble A vitamin—found most abundantly in cod liver oil, butter fat, egg yolk fat, liver, leafy vegetables and yellow pigmented vegetables. It is absent in vegetables which do not contain yellow pigments. It is relatively stable under conditions generally maintained in the cooking of foods.

A deficiency in the vitamin A causes a serious eye condition known as xerophthalmia and a xeratinization of the epithelium of the nasal pas-

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sages, larnyx, trachea, and bronchi. The salivary glands are affected, as also, the renal pelvis, seminal vesicles, epididymis and prostate.

Water soluble B is found in meat, eggs and milk, in the seeds of plants, such as beans and peas, in the unmilled cereal grains and in many vegetables and fruits. Lack of this vitamin results in the wet and dry form of beri-beri and Goldberger and his associates believe pellagra is due to a deficiency of a component of the fraction designated as vitamin B.

Vitamin C or the anti-scorbutic is present in large amounts in many vegetables, citrus fruits and to a certain extent in milk and meat. It is almost entirely destroyed at temperatures ordinarily used in cooking. This is not, so much due to heat, as oxidation. Canned foods cooked in vacuum and subjected to a high degree of heat for a short time lose very little of this vitamin, hence the substitution of strained canned tomato juice when orange juice is not available.

Vitamin D or the antirachitic is found in cod liver oil. It is most essential in order to maintain a proper balance of calcium and phosphorous in the blood, an imbalance resulting in the typical bone lesions of rickets. It is interesting to note that young rats may be kept on a ricket producing diet, without developing the disease, if exposed to sunlight or ultra violet lamp. Also irradiation of the food mixture prevents the development of rickets, due to the activating of a sterol. The view now prevails that a sterol of yeast or fungi especially from ergot called ergosterol is the principle which is activated by light and is much more anti-rachitic than cod liver oil.

A vitamin E is now recognized and is found abundantly in the lipoid extracts of cereal grains and various leafy vegetables. It has to do with fertility and its deficiency causes sterility in the male and female.

Just as important, therefore, and perhaps more so than the fat, sugar and protein and caloric value of foods are the accessory food factors, for without these, the results are inferiority in physical development, instability of the nervous system, lack of endurance and recuperative power and consequent cumulative fatigue. Resistance is low to infections, such as tuberculosis and other types where specific immunity is hard to develop by the body.

The mineral salts and vitamines are fortunately abundant in the average rational diet of American children and therefore should cause us little worry.

So few mothers are able to breast feed their offspring nowadays that a very lucrative field for synthetic breast milk has been created. Their name is legion and it is almost impossible to keep oneself familiar with the various brands, each purported to produce healthy robust babies. The idea is a good one, and the step is one in advance, just as the larger pharmaceutical firms have taken over the dispensing of standard prescriptions. The fact to bear in mind is that no one food will serve all feeding cases. They are valuable as complemental feedings and particularly if the milk of the community is of doubtful quality. Experience has proven that the majority of feeding cases do well on them if they are intelligently selected and intelligently fed.

A very useful division of the feeding schedule in a child's life as used by the writer is:

(1) The commencing of orange juice and cod liver oil at two months in addition to the breast milk or milk formula.

(2) The addition of cereal, preferably cream of wheat and zwieback at six months.

(3) The beginning of a mixed diet at nine months with the addition of whole grain cereals, the yolk of a hard boiled egg, a soup consisting of cereal, beef juice and finely mashed vegetables. Breadstuffs.

(4) At one year a three meal diet is instituted. Whole milk, one quart is given; coddled egg two or three times a week; finely minced or scraped beef; vegetables mashed through a sieve; stewed fruits, tapioca, rice or sago puddings.

(5) At eighteen months, a greater variety of meats including those of glandular organs as liver, kidney, sweetbreads, heart and brains and fresh fish. Eggs may be given oftener; custard and jello added to desserts; scraped fruit as apple, pear, peach and grape pulp.

(6) At two years, orange juice before breakfast; prepared cereals, such as shredded wheat, puffed wheat and rice, etc., substituted occasionally for cooked cereals; meats finely cut instead of minced or scraped; vegetables, finely mashed with fork; ice cream and sponge cake two or three times a week; cream cheese, honey, peanut butter and ripe banana.

Whole milk from first year on contains plenty of fat for growing the child, more is liable to upset him. The diet from two years on gradually approaches that of adult life. The heavy meal

of the day should be at midday. The same care in preparation and quality of food should continue through childhood, and milk should always hold an important place in the diet.

To sum up:

It has been definitely proven that a diet consisting of the following articles will produce the optimum of growth development and a spirit of wellbeing:

(1) The dairy products such as milk, butter and cheese; (2) whole grained cereals; (3) green leafy vegetables and fruits; (4) meats of glandular origin such as liver, kidney, sweetbreads, heart and brains, not too much muscle meats as steaks, roasts and chops. Added to these all children need cod liver oil and orange juice.

The Child.

All physical defects, such as diseased tonsils and adenoids, carious teeth, defective vision and phimosis should be removed. A complete physical examination will reveal these or other organic defects, which must be recognized and coped with. There are certain definite types of infants and children which if recognized can be fed accordingly. A few of the outstanding types are:

(1) The hypertonic child which responds to atropine.

(2) The child with pylorospasm which responds to atropine and thick feedings.

(3) The child with chronic intestinal indigestion or coeliac disease. How fat and sugar and high protein do best in this type.

(4) The child with chronic constipation: a diet fairly high in carbohydrates, low in fats and protein and pushing of fruits and coarser vegetables, and cereals help. In this condition the parents are apt to be more the problem than the child.

(5) The child which cannot take cow's milk. (If free from physical or organic defects, with proper home control to insure good food and health habits, with prevention of over-fatigue, with proper and sufficient food at regular times, with plenty of fresh air and sunshine the child is bound to respond in normal growth and development.)

The Parents.

Now comes the rub and the grief, the weak link in the chain and the cause of 50% of our cases of malnutrition, and unsuccessful feeding cases. Perhaps we as teachers have fallen down on our job and have devoted too much of our thought to the scientific end and too little to the instruction of parents in home control and home hygiene of the child. The process of raising children has gone on for such a time that the parents take it for granted that the providing of three meals a day is all that is required of them, and devote their time and thoughts to more interesting vocations. Fortunately, for children in the wealthier classes, nurses specially trained in the care of children are employed. The middle classes, if able to, probably employ nursemaids of an illiterate type who know little of the fundamentals of feeding, and care less, and in the poorer classes it is a process of the survival of the fittest.

So few mothers seem to exercise average intelligence in the rearing of their offspring, that it is a pleasure, indeed, to find a well-ordered home nowadays, where each of the child's whims and fancies are not the first consideration, and where the young hopefuls do not reign supreme.

Until two years, as a rule, the infant has been carefully fed and all details watched. He is now at the runabout stage, asking for and getting into things himself. Perhaps another child has come into the family and demands the care that was previously given number one. It is here that a stand must be taken by the parents, as this is the time when the child will assert his likes or dislikes, which, if catered to, are bound to spell disaster and result in malnutrition, feeding upsets and failure to progress.

He should not eat at the table with the adults until he is at least five or six years old. His food should be specially prepared and served from his own dishes, at his own table. If he refuses this or that of his diet, let all be taken away until the next meal. His feeding, play and rest hours should be very definite. Definite diets outlined by his physician for his age should be strictly adhered to and nothing given between meals except water or fresh fruits. This is one of the gravest errors on the part of the parents and one of the commonest causes of loss of appetite.

He should never be coaxed or bribed to eat, as that is particularly what he desires. He is then the star performer, in the spotlight and the centre of attraction of the household. Children will refuse food purposely, simply to attain this end. His meals should be well and tastefully prepared, placed before him and no comments made. The attitude of the parent should be that the child *will*

take his food well. Too much is generally made of the feeding period by the over-anxious mother, or nursemaid, with the result that the child recognizes this and due to the negativism which is inherent in each child's mind he simply refuses to eat his food. This is also true of his sleep, play and other incidents of his daily routine. Much more can be accomplished if this attitude of the child is understood by the parents.

DISCUSSION

Dr. Douglas D. Martin, Tampa:

There are so many factors that enter into the successful feeding of infants, that to intelligently discuss Dr. Sinclair's paper the time allotted will not permit me the scope that his subject is entitled to.

Having outlined to your own satisfaction the necessary foods, in your opinion, the patient should have, I consider the paramount issue is the mother and home surroundings.

I do not care how careful you are, how painstakingly you go into details, unless you have the proper home environment and intelligent cooperation, you are not going to be successful in feeding children.

You may feed one baby in a palace, another in the slums; if the palace baby has the improper home environment and the baby of the slums the proper home environment, you will succeed in the slums and fail in the palace.

Intelligent and faithful cooperation between mother and the pediatrician is the ground work for success.

Dr. J. D. Love, Jacksonville:

As you will note from Dr. Sinclair's paper, infant feeding is far from being a simple thing. And you will agree with me when I state that I am yet to be convinced that there is such a thing as "simplified infant feeding," despite many claims to the contrary. When every baby can be fed on a given formula, whether it is a lactic acid milk preparation or some proprietary food in can or bottle, then infant feeding will cease to be an art; but it will remain an art just so long as the individual baby's requirements are to be considered, as well as the individual baby's peculiarities and capacity for digestion. The so-called simplified methods now in vogue have much to commend themselves, but are also open to some just criticism. It has certainly rendered the feeding of infants much safer and simpler for the general practitioner, but at the same time has lessened, in all probability, the urge for improvement in infant feeding.

I heartily endorse Dr. Sinclair's statements. I cannot help wondering, though, if we are not committing an error which time alone will demonstrate. We are told that most of the proprietary foods contain all of the essentials of a perfect food, except possibly vitamins "C" and "D", which are partly destroyed by heat and preservation, and that these can be supplied readily by the addition of cod liver oil and orange juice to the diet. This may be true, and so far as I know it is, but it seems to me that a note of warning at the present time is in order. And when I hesitate to unreservedly approve of the indiscriminate feeding to all infants of dried and proprietary foods, evaporated milk, etc., I acknowledge that I am indulging in what Mariott has termed "an uncritical prejudice." Who of us can state with any degree of assurance that there are not other vitamins than the five now commonly recognized, that may be destroyed by heat and preservation, and which are also essential to growth and development. I wonder how far, in our effort to simplify infant feeding, we are departing from Nature's laws. And I wonder if, in our zeal to further simplify infant feeding, we are not imposing a penalty on the coming generation.

Dr. Wm. McKibben, Miami:

The thing that I am particularly interested in here is the case of the malnourished child coming down from the north. We have a large number of them here in Florida, in the winter time. They have been kept in the furnace-heated rooms of the north. In almost every case the history is the same: he has not been gaining weight for some months, has been running an afternoon temperature, and he will not eat the proper quality or quantity of food. Here in Florida our help is sought. The physicians north send these cases down with instructions that we shall gradually get them out of doors the maximum amount each day, exposed to the direct rays of the sun, in as small amount of clothes as possible. Second, check up on the number of calories of food. And third, give the maximum amount of rest. These little children come into the office, and I have classified them as "fatigue cases." The first thing

they do is turn on the faucet, then they try to get into the instrument case, and then they will turn the waste paper basket upside down. They are constantly going at sixty horse-power. The mother is almost exhausted from continually don't-ing the child. And he does not hear her don'ts, but continues with this same exhaustive pace.

Our procedure is to temporarily separate the tired mother from the child. Send him to the beach where in a sun-suit he is subjected to the ultraviolet-rays of natural sunlight, gradually increasing the exposure. He is carefully checked up as to health habits, the quality and quantity of food, and his daily routine is outlined to include the proper amount of rest.

If these children show any evidence of possible tuberculosis with a temperature of 99½ or 100, and a history of exposure or of not gaining weight, they are subjected to the usual careful physical examination including Von Pirquet and X-ray, and their weight watched from week to week. The important thing, as I see it, is to give them a great deal of rest; we can do that by this method. For 24 hours check up on his daily routine. The difficulty is in getting the young mother of this type of child to follow up that routine. Therefore, we try to separate the mother from the child. Get a high school nurse of rather intelligent type who will sit at a distance and read a book and not pay particular attention to the child. The little fellow is allowed to sit with shovel and pail, and thoroughly relax—subjective exercise. The result is, in a week or two the little fellow who has not been gaining weight for a couple of months will then be gaining and later goes home well pigmented with a very high degree of resistance against any infection.

Dr. Wm. E. Sinclair, Orlando (closing):

I very much want to thank the Doctors who discussed this paper.

ANOREXIA IN CHILDREN*

Council C. Rudolph, M.D.,
St. Petersburg.

The question of appetite, or rather the loss of appetite, with children is one of comparatively recent origin. Very few of the writings of the nineteenth century contain any reference to a problem which is one of the most serious and aggravating that the pediatrist of today has to confront. No doubt the advances of the last thirty years in hygiene, preventive medicine and infant feeding have been partially responsible for the advent of this disorder into the mass of other infirmities peculiar to the child. Instead of the perfectly natural voraciousness of the young human animal, we have in many cases the child who has developed a food complex due purely to the attitude of his environment. In other words, parents instead of allowing the child to grow up have become so obsessed with the necessity of giving him so many calories of such and such a food and insisting that it be swallowed that they have completely changed the child's normal psychology toward his food.

Apparently the condition may be divided into three classes according to etiology:

1. Anorexia due to acute or chronic pathological processes. This class has always been recognized and appreciated and may be summed up in a very few words. The child that is sick will not eat. Unfortunately the converse is not true. I say this advisedly for had we a sick child each time we would at least have something tangible on which to work. The majority are usually brought into our offices with the simple statement that "Johnnie will not eat" and after detailed examination with all technical aids we are many times no nearer the solution of the diagnosis than is the distracted mother.

Among the chronic diseases responsible for anorexia we have, of course, the old favorites tuberculosis, nephritis, heart disease, chronic upper respiratory tract infections and pyelitis. Any of these or any combination may prove, in its elimination, the solution of the case in hand.

The acute diseases are important only in view of the average mother's reaction. We all know that the child with fever shows first of all a disinclination for all food and a desire for water. We also know that if left alone this same child ordinarily regains its appetite as well as its loss of weight as soon as the acute illness has been overcome. But this purely temporary loss of appetite has many times been the spark that has instigated many months of concern because the child has persisted in his refusal of adequate amounts of food. The answer is in the mother's inability to leave the child to his own resources, with the development of the "won't eat" complex.

2. Anorexia due to what we may call unwise

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feeding is the second classification. This comprises in the main causes that react to prevent the institution at regular intervals of the normal hunger phenomena.

This normal hunger phenomenon has been deeply investigated by Carlson and others and their conclusions have been that hunger is a physiological sensation due apparently to the contractions of the empty stomach. These contractions may be inhibited by various factors, food in the stomach, smoking, sight of food, fever and certain pathological processes. This brings us to at least a partial explanation of the evil attending feeding between meals. How often we see the child who nibbles at breakfast, gets slightly hungry at 10:30 when he is given a cracker, an orange and a piece of candy or cookie and who then nibbles at lunch, eats his sweets at 3 p. m. and then increases his mother's agony by a refusal of all but the most tempting part of his supper. Unfortunately, in a majority of the cases no amount of insistence or argument on the part of the physician will prevent the so-called nervous mother from deviating from this course of frequent feeding after she has once entertained the idea that her child is wasting away and must be stuffed with food, especially if the school nurse has mailed her a card with the information that her child is 2% underweight. Incidentally this is a good opportunity to deplore the current tendency to making patients, in the sense of forced feedings and medicinal preparations, of perfectly well children because they happen to deviate a pound or two from the generally accepted age and height standards. There are many children today in perfectly good health of the tall lean habitus who eat the normal amount of food and who yet fail by a good margin to attain these more or less arbitrary standards. Continued effort to enhance the weight of the child not infrequently results in the self-conscious, introspective, neurotic type of individual. In arriving at an accurate conclusion as to the necessity of weight increase, the general family type and the child's own mode of existence should be taken into consideration.

Fats have been found to leave the stomach much more slowly than any other form of foods; hence, the proscribing of foods high in fats or fried foods and the fallacy of high fat feeding in order to eliminate that 2% underweight so religiously brought to the attention of the mother. True, the weight may be attained especially if the child is put to bed and compelled to stuff down what is put before him, but in the terms of the laity, as to its "sticking to his ribs" after he has resumed his normal activities, or as to the correction of the fundamental defect, I have my doubts.

Another type of the unwisely fed child is the pale, flabby type of individual that, thanks to the advocacy of milk as the ideal food for all children, has made his diet almost extensively of that article. I think that most of us agree that 1½ pints of milk daily are sufficient for the average child over 18 months of age and that milk alone is an adequate diet only for the child from birth to the fifth or sixth month. The child of three years who drinks a quart or three pints of milk daily will ordinarily forsake other parts of his diet essential for growth. This type of child ordinarily will benefit a great deal by a reduction in amount or in some cases elimination of milk entirely for a period of days until an inclination is shown for other foods.

Unwise feeding takes its importance not so much on the question of appetite as on the primary principle of hunger. The two, however, are so interrelated that it is impossible to adequately separate them. We do know, however, that appetite is dependent to a large extent on hunger. A child may have an appetite for certain enticing foods without the aid of hunger, but in order to engender an appetite for all or at least the majority of his foods he must be allowed the normal stimulus of hunger. And this is, in many cases, the solution of the appetite problem. Aldrich, in his excellent monograph "Cultivating the Child's Appetite," first of all finds the child's normal consumption of food at each meal and regardless of how little it may be, deliberately cuts that amount in half and allows him only that amount of food until he begins to beg for more at which time the food is gradually increased, keeping always just a little behind complete satiation.

The third and by far the most frequent causal agency responsible for inadequate appetite is a psychological one. In this day of incomplete classification of psychological phenomena with all the rantings of psychoanalysis, behaviourism, Freudism and various other complexities, the natural tendency is to smile wisely when the subject is brought up. However, the basis of psychological anorexia is a real one. And mimicry, negativism and the craving for attention, to say

the least, are influencing factors not only in appetite deviations but in all the voluntary reactions.

Negativism is the instinct on the part of the child to do what he is told not to do and not to do the things he is told to do. In other words, the child is instinctively obstinate. Of course, this trait is overdeveloped in some and underdeveloped in others. We occasionally see the perfectly docile child; the little "Lord Fauntleroy" type, who without question does what he is told to do, and is the acme of perfection in the eyes of all but his playmates just as we see the thorough recalcitrant to whom the suggestion that he must eat immediately brings forth a firmly determined statement on his part that he will not. Of the two types, the latter is certainly the most preferable. This type, as a rule, is fairly easily recognized, for the failure to eat is merely one detail in a story of many other disciplinary failures. The mother will usually state that she is unable to get the child to do anything without an argument. If told that he must not torment his sister by tearing her dolls, then tearing her dolls is the one thing he must do to the exclusion of all others. Punishment, pleadings and bribes, if anything, merely increase his desire to continue the unpleasantness. So with eating. Not until something else has replaced his negativistic interest or until all efforts to make him eat have been abandoned does he show any active interest in the process.

The craving for attention is as equally a potent instinct on the part of the growing child. And with this type, it is not until he finds that failure to eat brings to him this glorious attention as well as practically everything else that he craves that the beginning failure asserts itself. As has been pointed out by Aldrich, the history with these children frequently dates from the time of some transient acute illness. The mother will many times state that Johnnie ate everything that was placed before him until six months ago when he was sick in bed a week with a severe cold and that his appetite has never been right since. She is sure that there was some serious organic sequela that has never been determined. This of course is possible, but on detailed questioning we usually find that the story is something like this: during the illness Johnnie naturally wanted very little food, this with the increased burning up of his own tissues has resulted in loss of weight. The mother's reaction is one of fear. Johnnie previously had been two pounds overweight. He has now lost four pounds and is two pounds underweight. Therefore, stuff him with food until he is back to his original weight. The child, not yet feeling the urge for food, refuses all advances and soon begins to realize that this refusal of food brings out certain reactions on the part of the family that are highly gratifying. First of all, he has suddenly become a very prominent member. He is able to create a very delightful scene at each meal time. Later he learns that by continued refusal he will be allowed to play with Daddy's watch if he will take one more bite or if he will eat his spinach he can have an ice cream cone this afternoon. Soon he realizes that he can practically secure his every want if he refuses strenuously enough or that he can dictate his own diet, especially if he acquires the feat of vomiting, as they occasionally do. From this point the case usually progresses to the point where threats, bribes, pleadings, and punishment are all unsuccessful and the physician is finally consulted.

If all parents could be taught that the ingestion of food is a natural instinctive event and that it is only when its more or less involuntary nature is changed to a decidedly voluntary one that trouble begins, we would see far less of these cases.

Mimicry, another instinct of childhood, plays its part either for good or evil, depending entirely on the environment in which he is brought up and its favorable consequences are used in the treatment of a great many of these cases of psychological anorexia. The history often brings out a story of disturbed domestic relationship. The meal time which should be the happy meeting place of the different family members has become a disagreeable battle ground where old differences are paraded forth and new ones are brought up, and is as hurriedly terminated as possible. Is it any wonder that with these cases what should be the most anticipated parts of the day have become the most obnoxious? The child soon falls into the routine of the household and in his formative period begins to mimic the other members with the consequent development of a hurried inadequate appetite as well as the far more serious neuroticisms of disobedience, prevarication, temper tantrums and unnumbered others.

In addition, we have several other minor types. For instance, the child who is too busy or has too many outside interests to devote much time or

attention to his meals. Another type occurring with infants is the child who is nursed entirely on the breast until he has reached the weaning age and who on attempting this refuses milk from the bottle, spoon or cup. And forceful attempts to make him take it usually result in stimulating either his negativism or his craving for attention. For this reason it is the custom with most pediatrists to prescribe one supplemental bottle feeding before the second month and to feed his cod liver oil and orange juice from a spoon in order to accustom him to this implement also.

The treatment of these anorexias of childhood is, of course, more or less dependent on the cause and this is by far the hardest part of the problem. With the acute and chronic disease etiologies, the disease itself must be cleared up before any return to normal appetite can be expected. Incidentally, I have never been able to get any results with tonics of any kind except during immediate convalescence from disease and then I am not sure but that if left alone the recovery would have been just as rapid. Certain iron and arsenic preparations are of value in bringing the appetite back to normal where there has been a secondary anemia following illness *if the disease focus itself has been eliminated*. In the vast majority of cases of this type, however, if the disease itself can be eliminated there is no need of treatment directed at the appetite other than the advice to the parents to leave them alone and not to attempt the forcing of food.

With the unwisely fed child the importance is naturally in the correction of the technique or the types of food. The child who is not allowed to become naturally hungry is put on a regime that will eventually assure it. This usually consists of a three-meal-a-day schedule with the elimination of everything with the exception of water between feedings and as mentioned before, a reduction in the amount that he is accustomed to taking. When the child begins to beg for more food the battle is three-fourths won. Later, after the normal hunger and appetite has been established, I see no reason for iron-clad rules against an occasional cookie, candy or ice cream between meals, provided it gives no indication of impairment of the regular meals. With the milk-fed child, it is probably best to eliminate milk entirely until its memory as the essential of his diet has departed.

The negativistic child is probably the hardest problem of them all. Psychologists will probably say to divert their interests into other channels. This is not so easy to do in any case, and especially so in the cases of long standing where the negativism embraces every form of infraction. Changing the environment will probably produce the best results in controlling the situation. Sometimes merely having the child visit with relatives who are forewarned not to insist on the child eating will make for a marked improvement. Probably the most successful measure is placing the child in some institution such as kindergarten, day nursery or hospital ward where he is allowed to associate with other children of his own age who look forward to their meal time, this, of course, in an effort to stimulate the mimicry trait in the absence of any attempt to make him eat. Our custom in the hospital of my interneship was to take advanced negativistic anorexia cases and place them in the surgical wards for a week's period. The results were usually just short of miraculous. Of course, in placing a child in such a situation we are taking a chance of his contracting one or more of the usual infections floating about a hospital, but the results usually are well worth the danger.

Another method of combating the appetite problem with negativistics, though without influencing the fundamental psycho pathology, is in taking the opposite side of the argument. In other words, instead of begging him to eat, complain about his eating too much. Tell him that he can have only so much spinach. Or that the spinach is for sister and he can have none of it. This method of course does not cure his negativism but it may give him an appetite. The real cure of negativism, I believe, is only in the child's association with other children and the ultimate realization of the give and take principles necessary for existence.

With the child whose anorexia is obviously a craving for attention, the correction lies in the assumption of an indifference as to whether he eats or not and the refusal on the part of the parents to pleadings, bribes, threats, and punishment. This again is much easier to tell the mother than it is for her to carry out, but she should be made to realize that the therapy is as much or more directed toward her than toward the child. In fact, nearly all of these psychological anorexias require a firmness on the part of parents who have allowed the condition to progress on account of their lack of firmness and if the thorough cooper-

ation of the parents, both of them, can not be obtained or unless the child can be placed temporarily where adequate supervision will be enforced the case will usually go the way of all chronics—the cults and the quacks with their cure-alls—and finally back to complete resignation on the part of the parents which after all may in itself tend to correct the condition. The child, too busy to eat, should be fed by himself and by one person only. He should be allowed no toys or playthings or other forms of entertainment that would possibly divert his attention from his food.

Each case demands thorough study both as to diagnosis and therapy, and the prognosis is dependent primarily on the ability to secure cooperation on the part of the parent and secondarily on the length of time the condition has prevailed.

If you have gained the idea that all of these cases are open-and-shut or that success immediately follows treatment, the wrong idea has been conveyed. A good many of them have been allowed to follow the error of their ways for so long and so many parents are constitutionally incapable of controlling their fears for the health of their children that many of them can be ranked with the rest of the incurables.

DISCUSSION

Dr. George L. Cook, Tampa:

For some months following my location in Tampa, I served The Children's Home in the capacity of visiting pediatrician.

The Children's Home is a most complete institution and one that is truly a credit to the community. Three things impressed me: First, the general good health of more than 100 children. Second, the rugged appearance of the vast majority. Third, their complete obedience.

During my service there I spent many hours within the Home—not always professionally. It was interesting just to see such efficiency and cooperation with minimum help.

Not a single time did I see a child or know of a child that received physical punishment, nor did I note any occasion when a child was abused with words. They were spoken to with a voice sympathetic in nature but positive in tone. On one occasion, my associate, Dr. D. D. Martin, and I vaccinated 75 of the children, of all ages, in a very short period of time. I say without fear of contradiction on the part of those present, that not a single child was held while being vaccinated. An outstanding exemplification of obedience through proper training.

Gentlemen, picture these 100 children about their festive board, some so small they could scarcely stand alone, unassisted in their task, taking their food, drinking their milk—"good to the last drop." Does it seem possible to have 100 children of all types together and not a single case of anorexia?

It was Jacobi, a wise counsilor and father of pediatrics who wrote the following:

"What a child eats is of but little consequence compared with what he digests, nor are its subjective sensations the proper guide for the selection of food or the time of feeding." He further taught: "It is not always true that where there is no appetite there is no digestion nor are the pangs of hunger or the temptations of cravings safe councilors."

A very prominent family in Tampa adopted one of the little boys from The Children's Home, a manly little fellow, three years of age and my pet of the klan. He was carried away from the Home one afternoon and brought to my office for a final check. He greeted me as a friend. I examined him from head to foot; he obeyed my every command. Two months later this same little boy, because of a minor injury to his foot, was again returned to my office. He had to be dragged from the reception room and it required his adopted mother, my nurse and myself to hold him on the table. Gentlemen! draw your own conclusion.

I would advocate very strongly the establishment of some such institution, governed by some such laws that regulate The Children's Home, where Dr. Rudolph's anorexia patients, and yours and mine would be required to be entered until they are trained to obey.

Training the child of today to obey would be the greatest stride in preventive medicine up to the present time and probably equal any future constructive work.

Dr. Rudolph, I congratulate you, the subject so handled has the earmarks as from a master's pen.

Dr. Mary Freeman, Perrine:

The general practitioner has a good many disadvantages over the specialist, but also a few advantages. When this nervous mother brings her

child in with no appetite and tells it "don't" on everything and the child pays no attention, in examining the child, I also take in the mother and occasionally ask about her health. I usually find that she is constipated and has no appetite and a whole lot of other little troubles. And when I remedy her condition she is in better shape to take care of her child. I grant that all we have heard brought out about lack of training and the suggestions for supplying that training is good, but if we let the home go to pieces we are in a bad shape, and if we can somehow manage to take in that mother and put her on a basis where she can take care of her children, clean out that alimentary canal and be more normal—we have done a blessing for humanity.

Dr. G. S. Osincup, Orlando:

There are two points I would like to bring out: one is milk. I have found so many children that cannot take milk, and who improve 100% in thirty days when milk is taken away entirely, that I have come to the conclusion that milk is entirely over-stressed by the laity and by the medical profession. I believe you will get better results in a great many children who are suffering from chronic indigestion and malnutrition if milk is taken away from them.

Another point: The question of weight charts in common use in public schools. There are a number of reports from the schools going home to the parents saying that the child is 5, 10, or even 15 pounds underweight. The effect of this knowledge on the child is not beneficial. The mother gets excited and assumes that the child is suffering from acute malnutrition and the first thing they do is try to stuff all manner of food down that child. These weight charts are not accurate, for there is no consideration whatever taken of that child's heredity. It is ridiculous to assume that because a child is short and skinny or perhaps tall and skinny, that that child is malnourished. It is probable that his parents are also tall and thin and that the child is always going to be just that type.

I know of one case in particular. The child's father is about 5'4" and the mother about 4'8". The infant at one year weighed only 14 lbs. and at two years, approximately 24 lbs. Now, he is going through life underweight from 25 to 30 lbs. But every month a report from school shows him to be 30% underweight and acutely malnourished. These parents fortunately understand the situation. But the child, on the other hand, is being penalized in school by not being given his gold star for weight. The psychological effect on that child, I believe, is anything but good. We must take into consideration the heredity of the child in assuming that he is malnourished just because he is a certain type and 5 or 10 lbs. underweight according to a chart on the side of the wall.

Dr. Councill C. Rudolph, St. Petersburg (closing):

Thank you.

APHORISMS AND COMMON ERRORS IN THE EXAMINATIONS OF BABIES AND CHILDREN*

William McKibben, M.D.,
Miami.

Introduction.

Pediatrics is a proven specialty, limited, not by diseases or organs, but by age only. Patience, a love for children, and a sincere humanitarianism make for the greatest usefulness. Time and great care are necessary for detailed history, study of environment, keen observations and physical examination.

Occasionally, as the little patient's only champion, the physician must fight ignorance, neglect and crime, illustrated by the case on Olive Street, St. Louis, where the stepmother secreted a beetle under a half English walnut shell; the shell was fastened to the boy's skin, the beetle clawed or gnawed, and the boy in turn whined and moaned piteously. Result, sympathy elicited from the passing throng, a continuous stream of silver into the tin cup, and a fast-swelling bank account. A keen and well-trained eye, at first suspicious, soon demanded an examination and a showdown.

The pediatrician must have an intimate knowledge of dietetics, particularly as to food requirements, and the physiology and bacteriology of the digestive tract of the infant and child. He previously should have had about fifteen years' experience in general medicine. He should be well versed in infectious diseases, and diseases of the nose, throat, ear, lungs, heart, skin and nervous system. He should know the normal growth and physiological development, before attempting to combat the pathological.

*Read before the Dade County Medical Society, October 4, 1929.

He should be an interested student of child-psychology, especially as applied to the nervous or spoiled child, and its mother. He should be keen to correct any physical defect, but should remember that his work is far from finished until he has checked up on the child's health habits and food habits, too. He should inquire into susceptibilities, such as rheumatism, tonsillitis, chorea and endocarditis; and into immunities, such as measles and chicken-pox. Nutritive disorders and infections may run along together; in fact, several diseases may be coexistent. The order of the history is not essential so long as he gets all the data. He should constantly bear in mind that the infant is susceptible to diseases of the digestive tract—the child to contagious diseases; that a physician's thoroughness can well be judged by whether he takes the baby's temperature in the axilla and groin, or in the rectum; also whether or not he carries both a mouth and rectal thermometer, whether he washes them after using, and whether he carries along a slender bottle or tube of alcohol to disinfect them.

Diseases Overlooked. Of all the diseases of childhood, those most commonly overlooked are: acute and subacute otitis media, acute pyelitis, empyema following pneumonia in the infant, diphtheria, rickets, scurvy, tuberculosis and cerebro-spinal meningitis, infantile paralysis, endocarditis, intussusception, intestinal obstruction and pylorospasm or pyloric stenosis.

Laboratory vs. Examination. There is apparent in the coming generation of young physicians a growing tendency to become more and more dependent on our pathological laboratories, and less and less dependent on a detailed history and careful physical examination. As often happens, there is no admitting physician to get the history from the parent on entrance of the little patient; consequently, it may be two or three days before the interne sees the mother, and thus much valuable time is lost. Or, the young physician may have implicit confidence in the laboratory findings, and yet, mistakes in laboratories are not altogether uncommon. Isn't it a fact that the majority of cases in the homes of the patients are well diagnosed without the assistance of laboratory technic; this is particularly true in country practice. As in other walks in life, in the medical profession there is a premium on brains and on the physician who most efficiently develops his five senses.

This tendency to stress the laboratory represents the other extreme from the days some of us can well remember, when the genial old family doctor-type made his ward visit, beamed with kindly eye on the patients, hid behind a bush of heavy beard reaching to his waist line, stood at the foot of the bed, making his diagnosis at a distance, from the history and symptoms, or, at the most, came forward to feel of the pulse, gaze searchingly at the tongue or everted eye-lid. At the end of this cursory examination, he was apt to command in a deep-chested voice "do your tests," possibly not being familiar with what these tests were. And yet his ability to prognosticate was, at times, weird. He had not been trained recently to look for the rare or unusual, so that he had perspective such as the young man of limited experience has not, as yet, developed.

Approach. The personality and approach of the physician means so much to his little patients. There are three types of children with which we have to deal. Experience will help much to classify them quickly.

Types. First there is the vicious type who has had to work out his own salvation in an environment of cuffs and kicks, or, more likely, the spoiled child who dominates the entire family with an iron hand, is catered to in every way, and is apt to be regarded as a nervous child who won't eat, and enjoys the reputation thereof. To handle this type the quickest way, like giving ether to a baby, is the least cruel way. They are forcibly, and determinedly but kindly held, the culture is taken, or the throat examined or whatnot.

The second type is the truly nervous, scared, delicate or sensitive child. The approach must be gradual, allowing the patient himself or herself to make some of the advances; get some common point or ground of interest, and when once confidence is established the examination is easy. Sometimes it is well not to look the patient, particularly if a baby, directly in the eye, but make the inspection most impersonal; the father or mother may submit to an examination first, the stethoscope is a telephone, etc.

The third type is the truly wonderful little fellow who will endeavor in every way to cooperate with you, even to turning himself inside out to let you see his throat, and gags till the tears come, to better enable you to inspect his inwards. This type you can treat like a regular human being. In fact none should be treated like animals or

specimens, but as you would your own children, winning confidence, so that their manner and your manner do not suggest fear. But leave disagreeable procedures to the last, such as throat and ear examinations, and cultures.

Strip. Completely undress for a thorough examination, but, in certain cases complete examination may be unnecessary. Always give yourself the best chance, however, and this is done by stripping the patient. Looking back, most of us will recall that our mistakes were due, not to ignorance, but to carelessness or laziness. I remember a call one Sunday afternoon to a house full of drunken Lithuanians; the small dark bedroom was reeking with followers of Bacchus; I diagnosed typhoid without examining the child's back before sending him to the hospital. It was my chagrin to see the grin on the faces in the ward the next morning, when an easily detectable lobar-pneumonia was pointed out.

Estimate the general nutritive condition and development, at first, without weighing. The nutrition is shown by size, fatty deposits, muscular development, condition of bones and posture.

Tables. The tables of weights and measures are all right, but the people who use them are not. Tables simply represent average figures, but not necessarily the normal. All races, sizes, conditions, sick and well, are represented. A Boston terrier is just as normal as a Newfoundland dog, but its size is not the same. The family doctor has the advantage of knowing the size of grandparents and parents. The important relation is not weight and height to age, but that between weight and height; weight should be near the average for the given height. Deduct two pounds for girls' clothes, as the tables were compiled when they wore them. Measure different parts of the body for present record and future reference.

Color. Observe the color of the skin and mucous membranes particularly for jaundice and cyanosis, but remember that the color of the lips and nails is the essential thing. If you want to please the parents and learn little, use the Tallquist hemoglobin scale. Iron as a routine tonic is not so logical as iron for a low hemoglobin. The important point is that it be a soluble form of iron, rather than it be organic or inorganic. You may not be one of those who feed all your babies liver, but some do. It is of undoubted value in pernicious and some forms of secondary anemia, but useless in all other forms.

Teething. Fever indicates the presence of an infectious disease, acute fever an acute infection or inflammation—not teething. A diagnosis of difficult dentition usually turns out to be something else, and is a confession of weakness in observation. Nor be too ready to diagnose malaria in a non-malarial region, without blood findings. Search for some nidus of pathological organisms, especially the throat, ear and urine, remembering that infections of the respiratory tract and alimentary canal account for four-fifths of all of the diseases of children. Don't diagnose syphilis because babies and children have poor teeth. Remember that there is nothing characteristic of lues about the deciduous or milk teeth. Even in the permanent teeth, notched, pegged, or chisel-shaped are not pathognomonic, but a malformation that may be due to other causes than luetic. The evidence is only cumulative.

Head. The large square head of irregular shape in rickets is due to overgrowth of bone in the centers of ossification of the skull bones. The large, round, symmetrical head of the hydrocephalic is caused by the bones being forced out by intracranial pressure. But bear in mind that some children have large, and some small heads. Steal a furtive glance at the parents' heads. Above all, don't diagnose hydrocephalus or idiocy in a child because it has a head like its parents.

Throat. As to the proper method of examining the throat. With the child lying in bed, the mother or nurse can hold the wrists with one hand, and the flash light with the other; or the mouth can be made to face the window. However, I prefer to have the mother or nurse place the child's legs between her thighs, locking her legs over his ankles, placing the child's wrist opposite and parallel to each other and grasping them firmly with her right hand, and with the child's back to her chest, she cups its head back into the hollow of her shoulder with her left hand. It may take a little time to teach the mother or nurse to coordinate all three parts at the same time, but when once she learns this method, she never forgets. It makes examination and swabbing of the throat a simple matter, and obviates the necessity of pinning the little patient in blanket or sheet. The same method is useful in examining or incising an ear drum or

cervical gland. To obtain a good view of the tonsils, it is quite essential that the mouth be well opened, and the posterior third of the tongue pressed down far enough to make the child gag.

Tonsils, Adenoids. Don't forget that the small buried tonsil may be a much greater trouble-maker than the big well-draining one, and that it is quite normal to have large tonsils from 5 to 7 years. Get history of tonsillitis, cervical adenitis, arthritis, endocarditis, and chorea. Don't trouble the tonsils and adenoids unless they trouble the child with obstruction, infection, or chronic catarrh. The history of trouble is the essential thing. But remember that adenoids can cause much distress, such as otitis media and colds, without obstruction and facial deformity. The digital method with the right forefinger is the best way to palpate the naso-pharnyx for adenoids. After a few examinations, one's eyes are in the end of the finger. The jaws should be held apart in babies and young children, with the index and middle finger of the left hand pressing in on the cheek, and don't let up while the palpating finger is in the mouth. Do not lie by telling the child it will not hurt and thus engender mistrust, but tell him it will be at least uncomfortable, but quickly over with.

Ear. Don't forget that about 80% of all cases of otitis media in infants and young children do not have pain or ear-ache. If there is temperature, or they are sick without symptoms, be sure to take a good look at the ear-drum. This is easy with the electric auriscope, but it shows up the drum redder than with the head-mirror. It may be necessary to swab or wash out a little cerumen first. The auditory canal runs inward and downward, the membrana tympani being almost horizontal. On introducing the speculum, instead of drawing upward and backward, draw forward and downward. Sometimes we think we are looking at the drum, but are looking at the posterior wall, and I can remember the time when I tried to open the latter; it probably did no harm, but is not good practice.

Mastoid. Don't wait too long to diagnose and to operate on your mastoids even before tenderness, redness and swelling appear. I have found it a golden rule that any little patient with fever and a discharging ear for about two weeks, has mastoiditis; in such cases see if the posterior wall of the canal is bulging.

Chest. The chest of the infant and young child is more rounded, the lower opening wider, and the sternum higher than that of the older child or adult; like an adult with chronic emphysema. Pigeon breast usually means rachitis, but funnel chest is apt to be congenital. Dr. John Morse of Harvard in a recent paper, which I have quoted much, says that the rosary has become very important in Boston of late years. If you look for it you will find it in 90% of all babies. In Boston, if the physicians find it, they give cod liver oil; if they do not find it, they give cod liver oil just the same on the chance that they missed it, or so that they will not be able to find it later on. As a matter of fact a rosary does mean rickets, but a little rosary does not mean much; it is more essential that there be something else to go with it.

Pneumonia. It is often difficult to find physical signs of pneumonia in a child, and yet the picture and the symptoms may be typical. I have found diminished or muffled breathing to be the greatest help in diagnosing early pneumonia, even before I can hear fine pleuritic rales. Another most valuable early sign is in observing, with direct light, more motion on one side than on the other; one side lags. I believe that it is now generally known that the old diagnosis of "central pneumonia" no longer holds, but that the X-ray has shown that the consolidation begins at the periphera and as soon as the apex of the triangular shaped area reaches a bronchus, then, and not till then, do we get bronchial breathing transmitted through to the ear. Do not mistake the fremitus in bronchitis, with moist rales, for the friction rub in pleurisy. At L'Hopital des Enfants Malades, Rue de Sevres, Paris, Professor Marfan had us place a small square of cloth on the child's chest to train the unaided ear; however, the stethoscope is more convenient for inaccessible parts, such as the axilla, the supraclavicular space and the neck. The characteristics of respiration in children is more toward bronchial, and the relation between inspiration and expiration is not the same. The normal puerile respiration does not mean consolidation of the lungs. If you hear the same sound over the whole lungs, or both sides, and front and back, rest assured it is not bronchial, else the child would be dead. Compare the normal puerile respiration with the bronchial note of the larynx and trachea. Early in pneumonia, watch for a small area no bigger than the bell of the stethoscope, high in axilla or at apex.

Voice vs. Breath Sounds. Transmitted voice sounds are equally as important, and may show earlier than bronchial breathing. If you can't get the child to speak, make him cry by pressing down hard with one side of your scope; the mother would detect you if you pinched him or pulled his hair.

Percussion. Most everyone percusses babies and children too hard. With one finger the pleximeter and the other the percussion hammer, don't whack them, but tap so lightly you even have to get your ear down to hear it. If you tap hard, the sounds come from too wide an area, so that localized changes cannot be recognized. Symmetry and immobility are important in auscultation and percussion; one arm up and one down leads to error. So have the child even, as the chest wall is so compressible that the note is modified on the side.

Resistance. There is a difference of degree in the sense of resistance over the normal, the solid, and the lung covered by fluid. Over fluid it is like tapping over the thigh or liver. Valuable in differentiating between fluid in pleura and solid lung, since intensity of respiration is of little help, because if the lung is solid and the bronchus gets plugged, then respiratory sound is much diminished. On account of the thinness of the fluid layer, bronchial breathing and voice sound may be transmitted through a chest full of fluid. So, to differentiate fluid from solid lung before aspiration, note any displacement of organs, such as the heart, any dullness in Traube's space, and a sense of resistance with which few are familiar.

Abdomen. Palpate the abdomen carefully in every gastroenteric trouble, and in every acute fever, for localized tenderness and pain. Do not be deceived by child's false location of pain. In appendicitis, he may refer the pain to his chest, and in pleuro-pneumonia, to his abdomen. Muscular resistance should be uniform. Most valuable sign in an acute appendix is muscular rigidity in lower right quadrant, as the right belly of the rectus stands out board-like to protect the sensitive parts below; but do not be fooled in early appendicitis if pain is at first above umbilicus, or in upper right quadrant, as the appendix is apt to be high and freely movable in a young child. The same may be said about the shifting from right to left of the tumor in intussusception.

Responsibility. Remember that things happen fast in the child's abdomen; there is not much time for doubt or procrastination; be a faithful watch-dog; be alert and share responsibility with a reliable surgeon early; but, if possible, collect your history, facts and laboratory tests first, to give your consultant the best possible chance to arrive at an early and correct diagnosis and decision as to treatment; often a matter of life and death, and snap diagnoses are to be discouraged. At the best it is not always an easy matter, for acute pain in a child's abdomen may be due to the colic of acute indigestion, to pleuro-pneumonia, sore throat, acute otitis media, appendicitis, worms, enteritis, balanitis, Henoch's purpura, obstruction and intussusception. Nothing should be felt in the normal abdomen except occasionally the edge of the liver. Always be on the lookout for an overdistended bladder. Do not mistake for bronchial rales, the gurgling sounds of the intestine. Breath sound may sometimes be heard with the stethoscope over the abdomen, especially in peritonitis.

Distention. A distended abdomen may be a serious complication of diseases of the lung or pleura, but if not due to the usual overfeeding or indiscretion, if habitual, think of nutritive disorders such as rickets, marasmus, etc., and if persistent, consider idiopathic dilatation of the colon. Percuss flanks for ascitic fluid of tuberculous peritonitis, tumor, cirrhosis of liver, or general anasarca from heart or kidney disease. Do not mistake large spleen in malaria, typhoid, splenic anemia, leukemia, and splenomegaly for abdominal sarcoma, tuberculosis of the mesenteric lymph nodes or hyper-nephroma.

EXPERT TESTIMONY—ITS EVILS*

L. M. Anderson, M.D.,
Lake City.

Fellow Surgeons of the Florida Railway Association:

We are aware of the fact that evil has always and will always continue to exist in this one line of our profession, so long as man continues his struggle for existence.

It may be improved upon and partially alleviated to a minor evil, if we, as medical men, secure the aid of a majority of other outstanding professional men, whom we know to be honest, and are upholding the best. We know, too, that the higher type of man in any profession is to be

*Read before the Tenth Annual Meeting of the Florida Railway Surgeons' Assn., St. Augustine, April 1, 1929.

trusted, and no promise of gain will tempt him. Ofttimes, though, a designing lawyer, with his battery of questions, can get you all wrong, when the intentions are to be absolutely straight in your testimony, but if a man is crooked, no law can make him otherwise.

In suits for personal damage, you know the array of so-called expert witnesses are ever present to testify. Often, too, there is an honest difference of opinion between physicians as well as lawyers. The improper manner in which a case is handled, receives much criticism, especially that of expert testimony, when the lawyers do not agree. The American Medical Association and many State Associations have tried to better this condition, and much has been written and said leading to a definite move. The most outstanding suggestion up to the present seems to be for the court to appoint these witnesses, but in my opinion this would be a wrong move. You cannot *legislate* honestly into *physicians,* besides, it would be an infringement upon our rights as citizens.

As I look at it, the wisest thing for us to do is to keep this before our profession, individually and collectively. Talk about and think about it until we are ready to take some action that will get results. It would be well for the young medical student were he taught now regarding the evils of this phase of his professional career, to be sure he was right, to let not prejudice nor gain swerve him from the truth. Teach him concerning the intrigues and tricks of the expert lawyer in examinations.

It might be a wise and workable plan in starting a reform—a chair in medical colleges on expert testimony, with lectures by a learned lawyer of the highest repute. This is merely a suggestion—it might seem a far-fetched plan, but it means something to start men thinking, when reform is so badly needed.

This is now one of the darkest spots in our profession. I know of no other evil that leaves us in such status before the laymen. There will always be a suspicion of physicians among certain classes of people, because among a number of them there exists a distrust, caused by the charlatan, who it seems is always "abroad in the land." With all our modern educational advantages, there are many who still have their tinge of superstition, and persist in "planting their seed in the moon."

While we can claim the highest type of civilization that has ever existed in the history of man, we are still digging into the past and acquiring knowledge of great value. Not many years since we lightly criticised the Chinese practitioner in his seeming abuse and use of strange remedies; and, at the present day, we find use for many glands of the body as a remedy for different ailments, while twenty-five years ago the very idea would have met with derision. It would be superfluous for me to speak of the great advances made in the past quarter of a century.

Why could not this Association of Railway Surgeons go forward in this special work? After all 'tis nothing more than traumatic surgery, which consists in trying to repair the damage to parts injured—hoping by this means to restore them to normal health and usefulness.

As a last suggestion, I would say a conference of lawyers, physicians and judges might be a starting point for this reform.

CINCHOPHEN POISONING WITH CASE OF UNILATERAL DEAFNESS*

P. M. Lewis, M.D.,
Orlando.

Cinchophen and neocinchophen have been extensively advertised as superior to the salicylates in the treatment of rheumatism. Of these neocinchophen has become especially prominent in recent literature. Its freedom from toxicity in ordinary doses has been stressed.

Cinchophen and its close derivative, neocinchophen have been lauded as nontoxic drugs; however, it has been proved that they are not altogether nontoxic. Many notes of warning have been sounded against their indiscriminate use, and a study of the literature with reported cases demonstrates that they may and do produce serious symptoms in some cases. Cinchophen was introduced into this country under the proprietary name of atophan. Its derivative neocinchophen was introduced as novatophan. Cinchophen is phenylcinchoninic acid. Neocinchophen is the ethyl ester of paramenthylphenylcinchoninic acid. These substances are very different from salicylic acid.

The toxic effect of cinchophen was called attention to by Schroeder, who reported nine cases of severe by-effects from the drug, and eight other cases reported to him by other physicians.

*Read before the Orange County Medical Society, June 19, 1929.

In his experience the drug induces irritation of the digestive tract as well as constitutional symptoms of generalized itching, eruption and edema of the skin, fever, headache, etc. Hanzlik and Scott found that both cinchophen and neocinchophen show injurious effects on the kidneys, as evidenced by albumen, casts white blood cells in the urine. They also found that symptoms of salicylism, such as nausea, vomiting, dizziness and tinnitus, also accompany the use of these drugs. Boots and Miller report that seventy-five of the cases treated with neocinchophen showed toxic effects of some sort. Jokl reported thirty-nine cases of polyarthritis treated with neocinchophen without any by-effects. Klinkert has reported three cases of severe jaundice following the use of cinchophen and where other etiological factors were ruled out. Brugsch and Horsters demonstrated that cinchophen has a specific irritating effect upon the liver parenchyma, stronger even than the bile-salts, and capable of causing disease of the liver. With the exception of one case all of the many cases reported of cinchophen poisoning were due to long continued use of the drug.

With reference to the special sense organs we learn from Sajous, who considers the effects similar to cinchonism, that there may be disturbances of the auditory apparatus manifested as roaring or ringing in the ears, not infrequently with a slight degree of deafness. Dizziness and unsteady gait, due to vestibulor involvement, and diminished visual power, due to the effect on the retina, may accompany the ear disturbances, which may itself proceed to complete deafness. In the milder cases of ophthalmic involvement, disturbances of color vision and contraction of the visual field are the chief features. However, complete amaurosis, lasting days or weeks, may supervene. Pronounced narrowing of the retinal vessels with pallor of the optic disk accompany these disturbances. Degeneration of the retinal ganglion-cells and optic atrophy have been known to occur. The precise cause of these special sense disturbances are still in doubt. It has been regarded as due primarily to extreme changes in the vascular caliber, with or without hemorrhages, or more probably due to direct action on the nervous structures concerned.

CASE REPORT.

Mrs. C. M. B., white, house-wife, age about forty, consulted me April 15, 1929, relative to sudden loss of hearing in the left ear.

Family history unimportant.

Past history of long-standing impaired hearing in the right ear due to frequent middle ear abscesses in early life, but never any disturbance with left ear which was regarded as perfect by the patient.

Present history dates from about April first, last, when patient suddenly lost the hearing in left ear without any apparent provocation, in that the ear was free from any other trouble, *e. g.*, abscesses, pain, tinnitus, etc. Patient consulted a physician, not an otologist, who attempted to inflate the middle ear and great pain was experienced on the part of the patient at the time. No further treatment was obtained before I saw patient a few days later.

Examination revealed that the nose and nasopharynx were free from any disturbing influences on the ears. Otoscopic view of drums showed both to contain a perforation in the lower posterior portion with middle ear dry. The right drum perforation was the larger and, no doubt, of many years' standing, for the margins were white and scarred. The perforation in the left ear was comparatively recent in that it was more linear with margins red and a few points of dry blood thereon. It is not improbable that this perforation was produced at the time ear was inflated, producing the pain experienced by the patient. Both eustachian tubes were open but not normally so. Functional hearing tests gave the following: (See Chart A). Right ear, C_2 tuning fork, had a shortened air conduction of seventy seconds and a lengthened Schwabach of thirty seconds, which gave a high degree negative Rinné of sixty seconds. For the left ear the air conduction did not register the tuning fork vibrations at all while there was a shortened Schwabach of thirty seconds with a negative Rinné of forty seconds. The Webber test was distinctly lateralized to the right side. The left ear proved to be positively dead according to the Stenger test with the A1 forks.

No fistula symptoms.

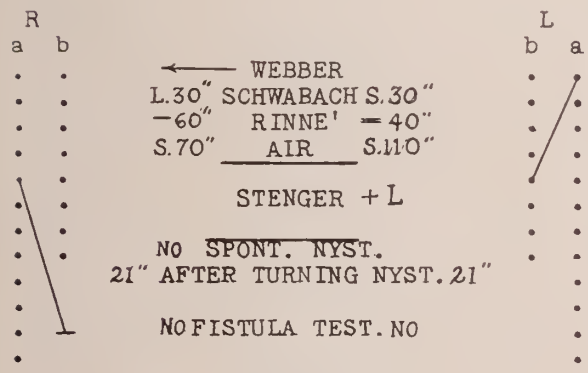
No spontaneous labyrinthine nystagmus and the after turning nystagmus showed the vestibular apparatus on each side to be quite normal, nor was there ever any history of any disturbed sense and motor functions of the intricate and complex performance of the organs of equilibration.

With these findings we are able to make a diagnosis of obstructive deafness in the right ear and perceptive deafness in the left.

From the case history and the pathological findings, I was unable to account for the perceptive left ear deafness. Patient was questioned closely as to recent acute illness and found that only a few weeks before the deafness, she had some rheumatic disturbances and was taking medicine under the direction of her physician. I obtained a copy of the prescription and found that she had been taking neocinchophen, average dose. The use of the drug was discontinued and on May 17, thirty-two days after first examination, there was a slight return of hearing in the left ear, vibrations from the tuning fork being slightly perceptible in front of the ear. I have not seen the patient since that time.

In the light of present facts I believe we are justified in making a diagnosis of unilateral perceptive deafness, complete—whether permanent or not—produced by the toxic effects of neocinchophen.

Chart A.



REFERENCES.

Hanzlik, P. J., and Scott, R. W., and Fetterman, Joseph: Cincophen, Neocinchophen and Novaspirin in Rheumatic Fever. (Atophan). Jour. Amer. Med. Assn., 76:1728, (June 18) 1921.

Barron, Mosses: Cinchophen Poisoning, Report of a case of Severe Allergic Reaction, 82:2010-2011.

Klinkert, D.: Jaundice from long continued use of Atophan, Die Therapie der Gegerwart, 67:334-336, (July) 1926.

Schroeder, K.: Cinchophen Poisoning. Ureskrift for Laeger, Copenhagen, 1922, lxxxiv, 1141.

Sajous's Analytic Cyclopedia of Practica Medicine: vol. iii, 1913, pp. 365-366.

Klinkert: Gelbsucht, also Folge Langeren Gebrauches von Atophan. (Jaundice as a result of continued use of Atophan). Klinische Wochenschr, 6:24-25, (Jan. 1) 1927.

SOME PRACTICAL SUGGESTIONS RELATING TO URINARY FINDINGS IN EARLY LIFE*

Jas. D. Love, M.D.,

Jacksonville.

In this paper is discussed briefly the practical bearing of certain urinary findings insofar as they pertain to diagnosis, progress and treatment of three common disorders of infancy and childhood: pyuria, orthostatic albuminuria and the ammoniacal diaper.

In recent years, owing to faulty interpretation of laboratory findings and insufficient investigation, pyuria, in the estimation of some of us, has too often become synonymous with pyelitis. From fairly extensive observation of pyuria, as it occurs in early life, it occurs to us that a few suggestions relating to urinary findings in this condition are not untimely.

Since uncomplicated pyelitis is usually attended with the passing of highly acid urine, we hesitate to denominate pyuria as pyelitis if the urine in an untreated case is alkaline. Most cases of pyelitis are caused by the colon bacillus which is only found in acid urine and usually as a pure culture. Many exceptions to this exist. In a shaken specimen of urine, the finding of clumped white cells is striking evidence of pyelitis, especially if found in an acid urine. In uncomplicated pyelitis, urinalysis will usually show a marked diminution of white cells so soon as the urine has been rendered alkaline, and if this does not obtain then some other cause for the pyuria should be suspected, such as urethritis, cystitis, tuberculous kidney or some congenital or acquired anomaly or deformity of the urinary tract. To determine in these cases the etiological factor of pyuria, the services of one versed in cystoscopy is usually demanded. An uncatheterized specimen of urine from either male or female is not acceptable unless a visual examination of the external parts has been made in order to make sure that the urine is not contaminated by urethral, vaginal or subprepucial discharge. No measure yet devised is satisfactory for collecting urine from the female except catheterization. This may be done

*Read before the Duval County Medical Society, Jacksonville, May 7, 1929.

with ease and perfect safety in female infants and older children, though is attended with difficulty in the male infant and should rarely be resorted to. It is needless to remark that a specimen of urine collected on a pad of absorbent cotton is valueless for microscopic examination. While all the foregoing suggestions relating to urinary findings in pyuria are of some value it is our opinion that the one of paramount importance we offer for your consideration is that in the conditions under discussion a fresh or shaken specimen of urine be used for microscopic examination rather than one that has been centrifuged. I would stress the point that not only for diagnosis but for ascertaining the progress of a case of either pyuria or hematuria a shaken specimen should be used. No less an authority than Still, who for years has been recognized as probably the most outstanding pediatrician in Great Britain, makes this statement:

"Here I would emphasize the advantage of examining the shaken-up urine rather than urine that has been allowed to stand or has been centrifugalized. The examination of a deposit gives no idea whatever of the relative amount of pus which is present; the deposit obtained by standing or centrifugalization from a urine which would show eight cells to the field in the fresh or shaken specimen does not differ from one which would show thirty cells, so that a valuable standard of comparison is lost. This principle applies not only to pyelitis but also to other urinary conditions, such as nephritis and hematuria. The centrifuge is often rather a hindrance than a help. We want to know not only that there are casts or blood-cells, but how many."

Helmholz, of the Mayo Clinic, who probably has done more work in connection with pyuria as seen in early life than any living authority, states that, "in normal urine of boys, obtained without special precautions, there are not more than two to three white cells to the low power field while in girls there are not more than from six to eight," and further adds that "a cell count of centrifuged urine is of little value in the diagnosis of pyelo-cystitis."

A condition frequently mistaken for nephritis and treated as such, often to the detriment of the patient, is orthostatic or postural albuminuria. Dependent usually on faulty posture, feeble musculature and malnutrition, it has no relationship to true nephritis. Lordosis and protruding abdomen are conspicuous features. While albuminuria may be marked the symptoms accompanying it are due to the underlying cause and not to a renal disturbance. The early morning specimen is usually free from albumin, but specimens secured after the upright or sitting posture has been assumed may show albumin to a marked degree. While various casts are occasionally found they have no pathological significance. A point of diagnostic value is that the urine may be rendered albumin free by the administration of the salts of soda or potash to maintain an alkaline reaction. The treatment consists in remedying the muscular defects and a generous and unrestricted diet. In most cases the assistance of one skilled in physical culture is invaluable.

A brief consideration of the ammoniacal diaper is, I trust, justified since much misapprehension exists as to both etiology and treatment. In this condition the baby's diaper, soon after being wet with urine, emits a distinctly ammoniacal odor and is accompanied by excoriation about the napkin area, often with resultant infection and not infrequently by the occurrence of the distressing condition of prepucial ulcer.

The etiology has been erroneously assigned to various dietetic errors and much useless medication and food modification employed for its correction. The causative factor is a micro-organism discovered by Cooke of St. Louis and termed the bacillus ammoniagenes. It is found only in alkaline stools, usually produced by a diet high in protein and low in fat and carbohydrates. The skin about the napkin area becomes contaminated with this bacillus in spite of frequent bathing. The urine when first passed is in every way normal but shortly develops the characteristic odor and properties due to the fact that the urea of the urine is split by the bacillus ammoniagenes and free ammonia liberated.

The baby's napkins, after being washed and dried in the usual way, should be soaked in a solution of bichloride of mercury in the strength of 1-5000, again dried and employed as any other napkin. Urine deposited on this napkin becomes a solution of mercury sufficiently potent to not only prevent further splitting of urea but to destroy the causative bacillus. Coincident with the employment of this measure, alkaline stools should be changed to acid by the addition of carbohydrates or fats to the baby's dietary. For the treatment of this annoying condition we find these two simple measures one hundred per cent efficient.

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PAPERS FOR NEXT ANNUAL MEETING

Assuming that all members of the Florida Medical Association are interested in seeing a representative scientific program presented at the Pensacola meeting in May, 1930, the Scientific Committee requests that any member who might desire to read a paper at the meeting furnish the committee, P. O. Box 81, Jacksonville, with a title and brief synopsis. The committee is making this suggestion through the columns of the Journal because up to the present time, responses to its letter have not been sufficient to make possible the arrangement of a well-balanced program. There is no reason why the Pensacola meeting should not be one of the best the state association has ever had, but the success of the meeting will depend entirely on an adequately arranged scientific program.

It is understood, of course, that some of the papers which may be offered will not be used

because of a possible preponderance of either surgical or medical subjects. Let it be understood that it is no reflection on any proposed contributor to have his paper postponed for some later meeting. The whole idea is to encourage all members to lend, if possible, aid in making the scientific program a representative one with no possibility of a feeling of disappointment on the part of any volunteer because it may not be possible to use his paper.

COUNTY SOCIETIES

It is, or soon will be, time to select your leaders in the different county medical societies. A good president and a good secretary-treasurer, full of enthusiasm and vim, will lead your county society to the top or to a coveted record. On the other hand, it is possible to have a very desirable membership, both in quality and numbers, and by selecting officers who procrastinate, fail to make a showing that will be in keeping with the possibilities available.

In our state association, there are thirty-five county medical societies. If, for the ensuing year, thirty-five presidents are selected who are willing to devote some real time to the work of organized medicine and thirty-five capable and conscientious secretary-treasurers chosen, organized medicine in this state will be felt far and wide. Each member is, therefore, urged to begin thinking now of selections for the important offices of president and secretary-treasurer for his county medical society.

Councilors and officers are urgently requested to invite all eligible doctors into the county medical societies of which they should be members. There may be some good doctor in your county who is not officially affiliated with your county medical society. A doctor who is not a member of his county society cannot be a member of the state association.

As a result of the law sponsored by our state association, requiring the annual registration of every doctor, a publication was issued by the State Board of Health, showing the names and addresses of all doctors registered in 1928. In this publication, the names of the doctors were shown alphabetically and also by towns. This publication may be valuable in checking your county medical society roster to locate doctors who are not already members and whom you consider worth while material.

In addition to taking in available new members, it is very important to see that the regular members are not dropped for failure to pay annual dues. 1930 dues will be due in a little more than a month, so it behooves the new officers, when taking over their responsibilities, not to overlook this important item. The showing of paid memberships at the annual meetings of the state association has been very gratifying in the past as evidenced by the annual reports published in the Journals as well as by exhibits. This reflects very favorably on those who are responsible for the affairs of the different county medical societies.

WHO SHALL IMMUNIZE?

The Communicable Disease Bureau of the State Board of Health has, for five years, been specializing somewhat in immunization as a control measure for smallpox, diphtheria and typhoid.

Dr. F. A. Brink, director of the Bureau of Communicable Diseases, now asks whether the time has come to relinquish this work partly or entirely to the practicing physicians.

In 1926 there were reported 2,890 cases of smallpox. In 1929, June to September, inclusive, no case was reported. A marked decrease in the number of cases and deaths from diphtheria indicates definitely the value of this procedure for protecting the individual and as a public health measure.

The advantage of the multiple pressure method of vaccinating has been shown. The reaction is less and the scar smaller if this method is used. There has been surprisingly little complaint about the pain and reaction from the Schick test and the toxin-antitoxin injections.

Has the value of immunization been sufficiently demonstrated? Can the responsibility of protecting the children by inoculation now be shifted to the shoulders of the public and the medical profession? Shall the State Board of Health diminish or discontinue this activity—even for a year—and try the expedient of giving more attention to communicable disease control and general health education, to consultation with local health agencies and to promoting physical examinations and the correction of physical defects—the removal of the handicaps of childhood?

The State Board of Health is soliciting counsel and advice from the members of this association.

STATE NEWS ITEMS

Dr. S. B. Forbes of Tampa recently attended the meeting of the American Academy of Ophthalmology and Otolaryngology in Atlantic City. Following the meeting Dr. Forbes spent several days in Philadelphia and New York.

* * *

Dr. C. E. Dunaway of Miami, treasurer of the Dade County Medical Society, was a recent visitor in Jacksonville.

* * *

Dr. F. L. Fort, orthopedic surgeon of the State Board of Health, recently held a clinic for crippled children at St. Petersburg. He was assisted in the work by Dr. T. M. Griffin and Dr. W. W. Harden.

* * *

Dr. Shaler Richardson of Jacksonville recently attended the meeting of the American Academy of Ophthalmology and Otolaryngology held at Atlantic City, following which he visited clinics in Philadelphia and New York.

* * *

Dr. H. C. Babcock of Miami recently returned from a 15,000-mile automobile trip through the western states and into British Columbia. Dr. Babcock visited many important hospitals while on this trip.

* * *

Dr. and Mrs. E. T. Sellers, Jacksonville, are receiving congratulations on the birth of a son, born in Riverside Hospital, October 14th.

* * *

Dr. J. A. Smith and family have recently returned to Homestead after a visit in Kansas City.

* * *

Dr. S. E. Chambers and family of Miami have recently returned from a visit north. While away, Dr. Chambers visited the Mayo clinic at Rochester.

* * *

Dr. B. B. Sory of Lake Worth has recently returned from a three months' trip abroad.

* * *

Dr. M. A. Lischkoff of Pensacola has recently returned from a several weeks' stay in New York and Philadelphia. He attended the meeting of the American Academy of Ophthalmology and Otolaryngology, held in Atlantic City.

* * *

Dr. H. C. Dozier, president of the Florida Medical Association, has been elected to membership in the American College of Surgeons.

The Fourteenth Annual Clinical Session of the American College of Physicians will be held at Minneapolis, Minn., February 10th to 14th, 1930.

RUFUS B. KIME

(A Resolution)

Dr. Rufus B. Kime passed away at his home in Orlando, Fla., the 16th day of August, 1929, in his seventy-third year. He was born near Knoxville, Tenn., and was graduated from the medical department of the University of Michigan in 1880, years before most of us were born.

For many years he served Atlantans faithfully and by skill, patience and painstaking care built up a reputation, which made him a leader of the medical profession in Georgia during that time. For many years he was chief surgeon to Georgia Baptist Hospital. He was an early elected Fellow of the American College of Surgeons. He organized the Georgia Sociological Society and for a number of years was its secretary and later president. Because of the poor health of members of his family, he was constrained to move to Florida in 1913.

For four years, he lived in Lakeland, where he continued his practice of surgery and among other activities founded the Midland Medical Society, of which organization he was secretary for seven years. After moving to Orlando in 1918, infirmities caused him to give up active work in medicine and surgery, but permitted him to renew his interest in laboratory and X-ray technique. He remained alive to the advances in medical science nearly to the end.

Feeling that his years of activity in the relief of suffering had earned for him the ease with which he departed this life, and, feeling that it has entitled him to the best the future may hold in store for him, or any, or all of us;

We, the members of the Orange County Medical Society, regretful that the end of activity must come, even to one whose life has been so well spent, extend to the members of his family, sympathy in their bereavement, and further, we will spread upon a vacant page in our minutes these words, as a sign of respect to him, our departed medical brother.

W. H. Spiers, M.D.,
G. H. Edwards, M.D.

The following program was recently presented at the quarterly meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson Medical Society which was held at Chattahoochee:

"Some of the Commoner Problems Encountered in Neurological Practice"—Ralph Greene, M. D., Jacksonville.

"Spinal Anesthesia"—James Bryant, M.D., Jacksonville.

"Differential Diagnosis of Gastro-Intestinal Lesion"—E. B. Milam, M.D., Jacksonville.

"Chronic Leg Ulcers"—W. G. Miles, M. D., Chattahoochee.

"Interesting Cases Gleaned from a Practice of Thirty-seven Years"—H. E. Palmer, M.D., Tallahassee.

"Nephritis from a Clinical Viewpoint"—F. Clifton Moor, M.D., Tallahassee.

* * *

The Marion County Medical Society met recently in Eustis with the Central Florida Medical Society.

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At its annual meeting held in St. Petersburg in October, the Pinellas County Medical Society elected the following officers: President, Dr. H. E. Winchester, Dunedin; vice-president, Dr. R. K. O'Brien, St. Petersburg; secretary, Dr. O. O. Feaster, St. Petersburg; treasurer, Dr. W. G. Post, St. Petersburg; censors for three years: Drs. R. H. Knowlton, St. Petersburg, and H. O. Brown, Clearwater.

The following scientific papers have recently been presented before this society:

"Abdominal Aneurysm"—Dr. W. W. Harden, St. Petersburg.

"Pericarditis"—Dr. L. M. Gable, St. Petersburg.

"Iodides in Medicine"—Dr. C. A. Williams, St. Petersburg.

"Salpingitis"—Dr. T. R. Griffin, St. Petersburg.

"Otitis Media in Children"—Dr. N. W. Gable, St. Petersburg.

"Case Report"—Dr. L. A. Wylie, St. Petersburg.

* * *

The 1929 annual meeting of the Florida Midland Medical Society was held at Plant City, Oct. 23rd, 1929. Meeting was called to order by the president, Dr. N. L. Spengler, Tampa. Other officers present were: Dr. H. K. Murphy, Mulberry, second vice-president, and Dr. Robt. C. Black, Plant City, secretary-treasurer, Dr. H. A. Day, first vice-president, being absent.

After a business meeting the following scientific program was presented:

"The Nervous Child"—Dr. H. Mason Smith, Tampa.

"Uterine Retro-Displacement: A Technique for Replacement"—Dr. G. H. Edwards, Orlando.

"Vitamins and Their Relation to the Gastro-Intestinal Tract"—Dr. Burdette Smith, Tampa.

"Rural Public Health for Rural Needs"—Dr. A. C. Hamblin, Tampa.

"Differential Diagnosis of Abdominal Conditions"—Dr. Herman Watson, Lakeland.

"Urinary Calculi"—Dr. James L. Estes, Tampa.

"Case Report—Congenital Fragilitas Ossium"—Dr. T. C. Maguire, Plant City. Dr. Maguire presented the little patient of 5 years who has sustained 64 fractures. Dr. Maguire also presented a urinary dementia case, which provoked quite a general discussion.

"Climate in Treatment of Pulmonary Tuberculosis"—Dr. A. F. Higgins, Tampa.

"Case Report"—Renal Calculi"—Dr. J. W. Alsobrook, Plant City.

All papers were of the very best, very instructive and the discussions were unusually good.

The following officers were elected for the ensuing year:

Dr. Walter A. Weed, president, Lakeland.

Dr. Cecil Vaughan, 1st vice-president, Tampa.

Dr. J. W. Alsobrook, 2nd vice-president, Plant City.

Dr. Robt. C. Black, secretary-treasurer, Plant City, reelected.

* * *

Dr. Earl C. MacCordy has moved his office to Room 202, Snell Arcade Building, St. Petersburg.

* * *

The Pasco-Hernando-Citrus County Medical Society met with Dr. A. B. Cannon at Dade City, September 12th, 7 p. m. Dinner was served at the Osceola Hotel, followed by a scientific program presented in the office of Dr. T. F. Jackson. Dr. C. W. Pease of Tampa was a guest. The following members were present: Drs. G. R. Creekmore, L. T. Furlow, and W. S. Hancock, Jr., Brooksville; Dr. T. J. Hudson, Crystal River; Dr. T. F. Jackson, Dade City; Drs. Geo. A. Dame and J. F. Miller of Inverness; and Drs. J. T. Bradshaw and A. B. Cannon of Lacoochee.

Dr. and Mrs. Courtland D. Whitaker of the Florida State Prison at Raiford, announce the arrival of a daughter, Rose Mary, born October 7th.

* * *

Dr. J. C. Davis of Quincy recently attended the meeting of the American College of Surgeons in Chicago where he was made a Fellow.

* * *

Dr. Gaston Day of Jacksonville and Miss Juanita Lord were married September 16th at Kansas City, Kansas.

* * *

Dr. C. H. Farmer has returned to Lakeland, having served as resident physician at the Spartanburg Baby Hospital at Saluda, N. C., during the summer months. He also attended the lectures of the Southern Pediatric Seminar.

* * *

Dr. and Mrs. J. T. Denton of Sanford spent the month of September in Washington, D. C.

* * *

Dr. J. H. Pierpont of Pensacola recently returned from New York where he attended clinics for several weeks at the New York Polyclinic and Medical Center.

* * *

Dr. Richard B. Leith recently moved his office to 201 Snell Arcade Building, St. Petersburg.

* * *

Dr. and Mrs. M. A. Nickle and daughter of Clearwater, have returned from a motor trip and summer vacation at Toronto, Tweed, Montreal and other places in Eastern Canada.

* * *

Dr. H. A. Peyton, Jacksonville, has returned from a visit to the clinics of Baltimore and Washington. On his return, Dr. Peyton stopped off in North Carolina for a few days' vacation.

* * *

Dr. Ralph Gowdy recently moved his office from 509 Olympia Building, Miami, to 925 Lincoln Road, Miami Beach.

* * *

Dr. and Mrs. H. O. Brown of Clearwater recently returned from a vacation spent in Chicago and New York City. Dr. Brown attended clinics in Chicago and was present at the meeting of the American Roentgen-Ray Society held in New York City.

Dr. J. H. Carter recently moved from Pensacola to enter the Beaumont Medical and Surgical Clinic, Beaumont, Texas, as head of its Eye, Ear, Nose and Throat Department.

* * *

Dr. E. G. Lindner of Ocala recently returned from a trip through the eastern and central states where he visited clinics.

* * *

The many friends of Dr. Ralph J. Greene, of Perry, secretary of the Taylor County Medical Society, will regret to learn that he has been very ill in the Archbold Memorial Hospital, Thomasville, Ga., for several weeks. Dr. Greene is now convalescing and it is hoped that he will very rapidly regain complete health.

* * *

Dr. L. M. Jenkins of Miami announces the removal of his office from 1661 W. Flagler St. to 712 Huntington Building.

* * *

Dr. R. E. Repass of Miami Beach recently returned from Philadelphia and Atlantic City where he attended clinics. Dr. Repass also attended the meeting of the Otolaryngological Association held in Atlantic City.

A very interesting meeting of the Suwannee River Medical Society was held at the Blanche Hotel, Lake City, Friday evening, October 11th. Twenty-five members and guests surrounded a bounteous table and enjoyed a splendid program. Dr. Henry C. Dozier, president of the Association, gave a very inspiring and instructive address. Dr. Henry Hanson, the new State Health Officer, and Dr. Stewart G. Thompson were among the guests who were called on for brief talks. Dr. L. J. Arnold, the genial president, acted as toastmaster, calling on the different members with very appropriate remarks about their character or work. Dr. L. M. Anderson, after being incapacitated for many weeks, was back in his place adding to the interest of the meeting by his buoyant personality. Dr. Geo. O. Davis of Madison was not able to attend the meeting as a result of an accidental fall which occurred two weeks previously. Dr. Davis' absence was lamented as he has always been very regular in his attendance.

* * *

Dr. C. F. Fleming of Bradenton has recently removed to Elkhart, Indiana.

Dr. J. D. Bell of Pensacola has recently returned from a trip to Paris, France.

* * *

Dr. W. J. Knauer of Jacksonville recently returned from Atlantic City where he attended the meeting of the American Academy of Ophthalmology and Otolaryngology.

* * *

Dr. D. T. Babcock of Miami has returned from Maryland where he visited the Johns Hopkins Hospital.

* * *

Dr. M. P. DeBoe of Miami recently attended the meeting of the American Academy of Ophthalmology and Otolaryngology held in Atlantic City.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

of The Journal of the Florida Medical Association, Inc., published monthly at Jacksonville, Florida, for October 1, 1929.
State of Florida, County of Duval.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Shaler Richardson, M. D., who, having been duly sworn according to law, deposes and says that he is the editor of the Journal of the Florida Medical Association, Inc., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

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Managing Editor, none.
Business Manager, Stewart G. Thompson, D.P.H., Box 81, Jacksonville, Fla.

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Notary Public State of Florida at Large.
(Seal) (My Commission expires April 9, 1932).
Form 3526.—Ed. 1924.

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	92%
Bay	J. M. Whitfield, M.D., Panama City.					64%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		71%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	70%
Columbia	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	73%
DeSoto-Hardee-Highlands	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	100%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	86%
Escambia	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	74%
Hamilton	R. A. Barnett, M.D., White Springs.					100%
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	85%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	63%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	93%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	82%
Leon-Gadsden-Liberty-Wakulla-Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	71%
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Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	95%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	100%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	85%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	90%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
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Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	72%
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St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	64%
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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

THE importance of recognizing tuberculosis in its incipiency is repeatedly and deservedly emphasized. The alert physician, when he suspects the disease, makes careful search for lesions in the apex of the lung. The supposition is that the tuberculous process begins usually in the apex, from which focus it tends to spread downward to the lung generally. Several clinicians have recently called attention to a

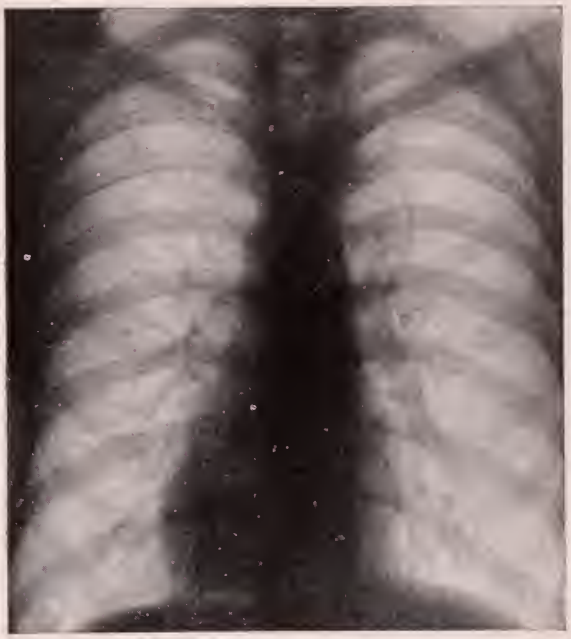


FIG. 1. This roentgenogram was obtained at a routine examination of employees. The patient at this time was in perfect health, and the roentgenogram does not show any evidence of tuberculous involvement of the lung, and in particular no apical foci.

form of tuberculosis which begins in the infra-apical region and which spreads rapidly from there to other parts of the lung, including the apex. Max Pinner of the William H. Maybury Sanatorium, Detroit, has studied this type of lesion in 200 cases and presents his conclusions in this number of TUBERCULOSIS ABSTRACTS, a more complete discussion of which appeared in the *American Review of Tuberculosis*, February, 1929.

(*Continued on page 232*)

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—A. J. CEMACH, M. D. *An extract from his article, "Ultraviolet Therapy in Oto-Rhino-Laryngology," read before the Second International Conference on Light and Heat in Medicine and Surgery, University of London, 1928.*

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ACUTE SUBAPICAL TUBERCULOSIS

Wessler, some years ago, pointed out in this country the frequency of the early appearance of a subapical infiltrative process, the gravity of which, as regards progressive disease, was quite clearly shown. More recently, certain German workers, notably Assman, Redeker, Romberg and Ulrici, have pointed out that much of the tuberculosis seen in adults is the result of a bronchogenic reinfection, either endogenous or exogenous, with a small tuberculous bronchopneumonic focus located anywhere in the lung, but most frequently in the infraclavicular region. This type of the disease comes on suddenly with symptoms that are grippe-like or catarrhal. Variations of this conception have been presented by different observers, but most of them agree that it is this infraclavicular infiltrative lesion and not the truly apical productive one, which is serious in terms of the development of progressive disease.

A study of the onset and type of lesion in two hundred cases has been made in an attempt to check the accuracy of the view that ascribes so much importance to the infraclavicular lesion.

Cavity formation was particularly observed as to the point of origin, migration, and especially the time of appearance in relation to onset. The rapidity of formation of cavities after onset, with the tendency to form in the subapical region and migrate upwards, was very striking. The X-ray was found to be the most useful in detecting the early development of the subapical lesion and bears out the value of using the X-ray as an adjunct to physical examination in every suspected chest condition.

TABULATION OF FACTS STUDIED

In these two hundred cases, a very careful history of the onset and course was taken, and every available X-ray of each case was studied. With this information tabulated, the following points stand out strikingly:

1. In pulmonary tuberculosis, sudden onset is not less frequent than is insidious onset.

(*Continued on page* 234)

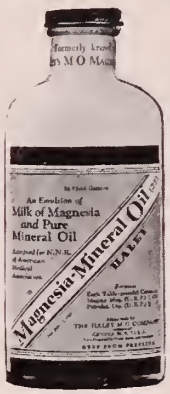
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2. Apical involvement is not characteristic of incipiency, but occurs in the majority of cases after the incipient stage has passed.

3. The extent of the lesion does not bear a direct relation to the duration of the disease. Of all patients reaching the far advanced stage, the majority do so within the first half year.

4. Cavitation is not a late occurrence; its frequency is nearly the same at any stage of the disease.

5. Apical involvement bears a close relation to the type of the clinical course.

6. An analysis of patients with pulmonary tuberculosis as to the two characteristics—"apices involved" and "type of onset"—leads to the differentiation of two different clinical types of disease. The one with apices free has a sudden onset with a bronchopneumonia (tuberculous) which usually progresses rapidly with acute exacerbations and the early development of advanced disease. The other type has an insidious onset, involves the apex primarily, and progresses very slowly, if at all.

Apical lesions as such are not always benign, as they often are the result of spread upward from a subapical lesion; however, this study would indicate that true apical tuberculosis seldom progresses caudalward to extensive disease.

SUMMARY OF CONCLUSIONS

1. Progressive and destructive pulmonary tuberculosis usually begins *suddenly*, with *exudative subapical* lesions.

2. Strictly apical productive tuberculosis is not, as a rule, the incipient stage of progressive and destructive pulmonary tuberculosis; it may precede the latter; but even in such cases, the latter starts usually as stated under 1. The role which apical tuberculosis plays in phthisiogenesis is rather insignificant as compared to that of acute subapical infiltrations.

3. Lesions far advanced as to extent, and excavations, frequently develop within less than six months.

(*Continued on page* 236)

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4. Processes leading to active progression and to excavation are most frequently associated with acute symptoms.

5. Apical involvement, in the majority of patients, is not an occurrence of incipiency but a late development.

6. Diagnostic and therapeutic endeavors should be directed towards the acute subapical processes, and not only toward the insidious apical disease.



FIG. 2. The second roentgenogram of the same patient was taken seventy-eight days later and ten days following the onset of an acute grippe-like disease. It shows a rather extensive infiltrative lesion in the left infraclavicular region with beginning central excavation.

7. Physical signs and symptomatology, traditionally described as characteristic for "incipient pulmonary tuberculosis," are misleading for the detection of truly incipient subapical acute processes.

Tuberculosis and health associations throughout the United States are now making plans for an early diagnosis campaign to be conducted during April, 1930. Billboards, posters, pamphlets, newspaper and magazine articles will emphasize the importance of discovering the early signs of tuberculosis in children.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)

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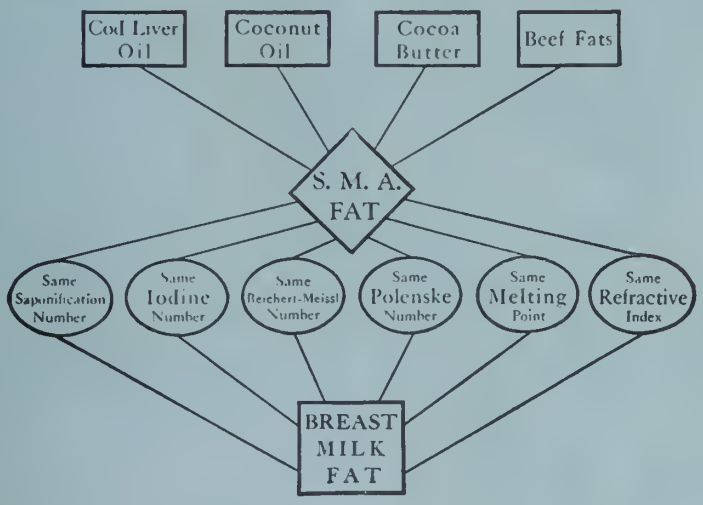
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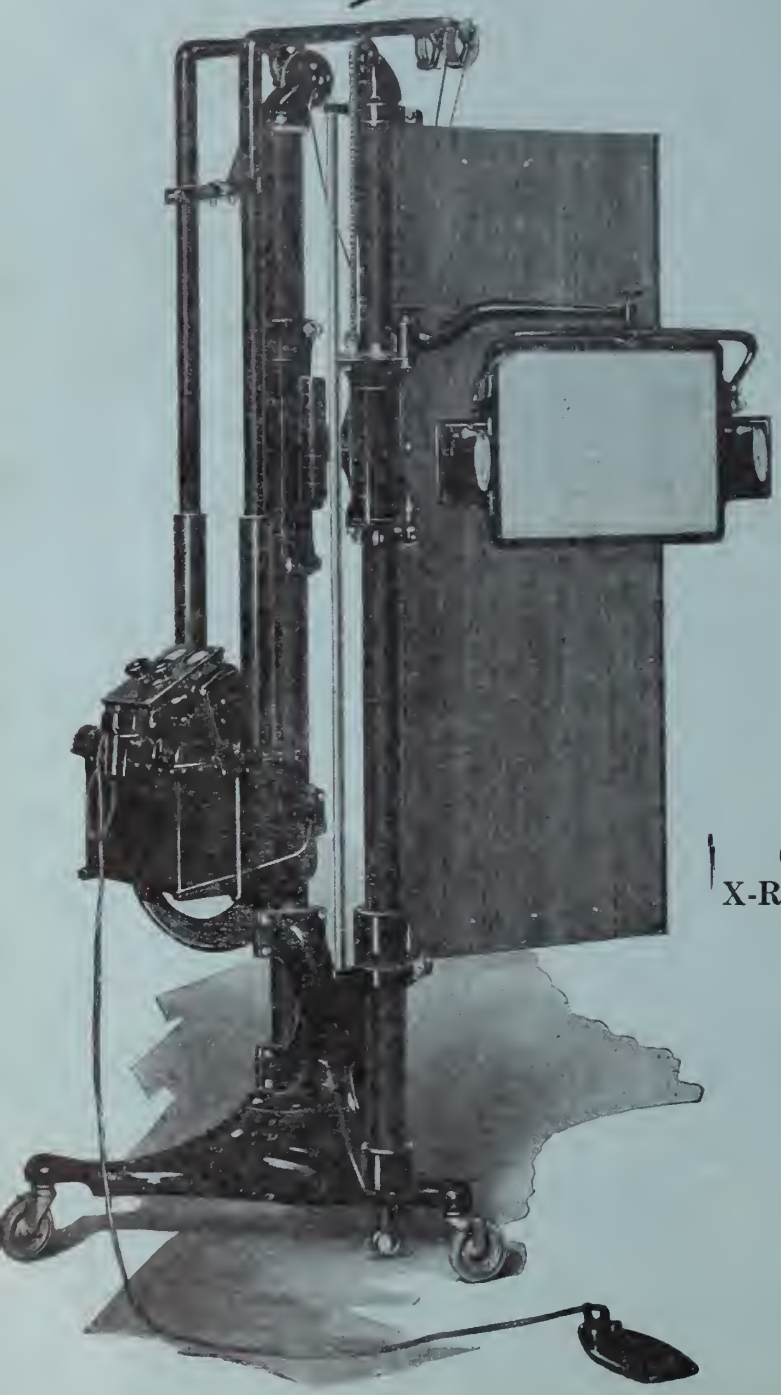
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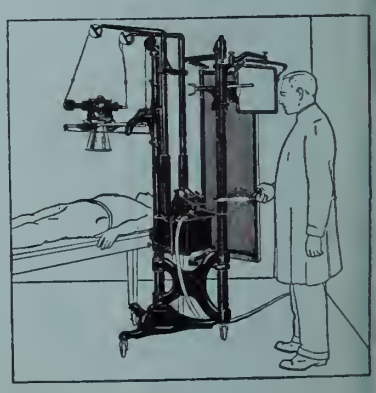




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¼ cup cold water, 1⅓ cups hot water					
1 teaspoonful whole mixed spices					
½ teaspoon salt, ⅓ cup vinegar					
½ cup chopped cahhage	50	1		3	
½ cup chopped celery	60	1		2	
¼ cup canned green peas	40	1		4	
¼ cup cooked beets, cubed	40	1		3	
Total		10		12	88
One serving		2		2	15

Soak gelatine in cold water for five minutes. Bring to boil water, salt and spices. Pour on gelatine to dissolve it and add vinegar. When jelly is nearly set, stir in the vegetables, pour into mold and chill until firm. Unmold on lettuce and serve with salad dressing. Garnish with sprig of parsley or strip of pimento.

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¼ cup cold chicken broth or water					
1¼ cups hoiling chicken broth, fat free					
½ teaspoon salt					
Pinch pepper					
1 cup cooked chicken, cuhed	125	24	20		
¼ cup cream, whipped	55	1	22	1.5	
Total		31	44	1.5	526
One serving		5	7		88

Soak gelatine in cold liquid for five minutes and dissolve in hot broth. Season with salt and pepper and chill until nearly set. Fold in chicken and whipped cream. Turn into molds and chill until firm. Serve on lettuce or garnish with parsley and strip of pimento.

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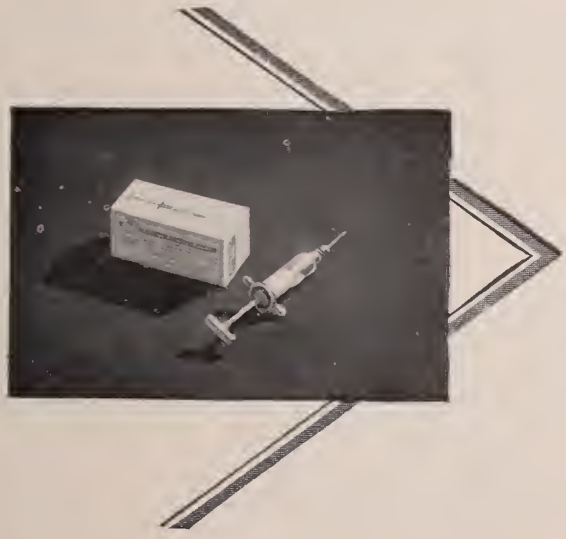
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION
PUBLISHED MONTHLY
Volume XVI Jacksonville, Florida, December, 1929 Number 6

PERINEPHRITIC AND PARANEPHRITIC ABSCESS*

James L. Estes, M.D.,
Tampa.

In presenting this paper on the subject of accumulation of fluids, or the formation of an abscess behind the posterior parietal peritoneum, I do not intend to introduce anything new, but rather to report a case in detail in order to bring out its salient and essential findings as well as to draw your attention to similar cases reported; with the hope that some of the members present will have something to add.

Perinephritis is an inflammation of the fibrous capsule of the kidney; whereas, paranephritis is an inflammation of the connective tissue, and the pararenal fat; therefore, there is no doubt that true perinephritic and paranephritic accumulation are pathologically and etiologically different.

If we review the anatomy of this region, we will recall that the sub-peritoneal fascia passing backward from the antero-lateral abdominal wall, divides, and envelopes the kidney with its true capsule, and the false, or fatty capsule (the cushion of the kidney). Mesially the anterior lamella passes anterior to the kidney, and large vessels in front of the spine, to continue as the anterior layer of the opposite side.

The posterior lamella passes posterior to the kidney, and anterior to the quadratus lumborum muscles in this region, and is attached to, and lost in the periosteum of the anterior surface of the body of the vertebrae. This is demonstrated when you cut down on a kidney and see a tough fibrous layer of the anterior lamella of the sub-peritoneal fascia. On opening this facial layer, the perinephritic fat or fatty envelope rolls up into the incision. Accumulations of fluid between these layers, or the true perinephritic space, may result from a twist or mild trauma, such as wrestling, straining at lifting, or even a blow over the abdomen, and this may become secondarily infected from some distant focus through the media of the blood stream. Or, it may be due to a secondary extension from abscess in the kidney proper, extension from pyelonephritis, or by the erosion of a stone through the pelvis of the kidney, thereby causing a leak of infected urine with extension and abscess formation around the kidney.

I would like to mention here a case where the stone obstructed, by lodging in the ureter high up. A catheter was maneuvered past the stone and left in place for several days, and during the time the catheter was left in, the patient developed a perinephritic abscess, which required drainage through the back. What ruptured the pelvis and caused the extension of the fluid? It may have been due to the presence of the stone with gradual erosion, or to presence of the catheter causing pressure and erosion with extension. There is no doubt that leaving a catheter in the ureter for too long a time without changing it, is fraught with danger.

The case referred to above was a true perinephritic abscess.

The area situated behind the peritoneum bounded above by the diaphragm, posteriorly by the quadratus lumborum muscle and below by the false pelvis is the so-called paranephritic body, which is loose connective tissue and fat according to Zuckerkandl and Gerota, and is situated behind the posterior lamella of the sub-peritoneal fascia which separates it from the true perinephritic space.

Sudden violence as in twisting or lifting which would cause the tearing of the muscles adjacent to this area, namely, the quadratus lumborum muscles or psoas muscles might cause hemorrhage, and if in sufficient amount gives rise to mass formation, small or large. This clot may or may not become infected but if it does so, it is usually through the lymphatic or the blood stream. If not infected, a slow absorption takes place with little physical findings, other than tenderness and localized soreness and possibly slight fever.

If it becomes infected a definite abscess is formed which may spread over a considerable area, and so bulge out the latero-posterior abdominal wall that the soft tissues are so tense the pelvic brim cannot be palpated and the costal

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

arch markedly pushed outward and a definite rounded prominence of the side becomes apparent.

In true perinephritic accumulations the bulging is usually anteriorly, and not so widely spread posteriorly, unless there is sloughing through the posterior lamella of the above mentioned fascia, thereby involving both perinephritic and paranephritic areas. It is of the latter type of case which I wish to report, and to give the findings in my case, and also other cases reported in recent literature.

History.—Usually found in patients doing heavy physical labor or in those subjected to violence with the conditions as before mentioned, the trouble dating back to a specific time when they lifted a heavy object or was forced to put special strain on the muscles of the back to prevent being crushed or permitting some object to fall on them.

Most often there is an immediate sharp pain or aching in the back, accompanied by a faint feeling which may soon pass off. The patient after a few days may resume his or her former duties, only to come down with a dull aching pain in the back, extending downward toward the hip, and possibly may detect a lump in the back, but with no urinary disturbances.

Essential findings in physical examination: If the condition is that of acute perinephritic abscess, the patient has chills followed by high fever and rapid pulse, high leucocyte count with a corresponding high polymorphonuclear cell count. The mass is probably more distinct in outline and with definite urinary findings, such as pus in the urine, whereas, in the paranephritic accumulations the symptoms are more mild. In three cases which came under my observation the temperature arose to 100°-102° only. The white cell count was 16,000 to 18,000 with polymorphonuclear cells 91% to 94%, pulse 90 to 104. Urine concentrated but otherwise normal.

The general appearance of the patients is that they are very sick, with pinched faces, dry skin, and definitely septic, with no outstanding findings except the local conditions, that is, bulging and a mass in the side with tension of the lateral abdominal muscles of the side involved with a softness of the anterior and lateral muscles of the opposite side. Oftentimes with the physical findings after a carefully taken history and normal urinary findings we are able to draw our conclusions without the aid of ureteral catheterization and ureteropyelograms. It is wise, however, to at least have a primary X-ray plate to rule out kidney and ureteral stones, and to show lesions of the vertebra, such as fractures, or destructive lesions, tuberculosis of spine, cancerous destruction, or new growth, and malposition of the vertebrae. The posture assumed is so noticeable in these cases that one often thinks he may be dealing either with lesions of the vertebra or hip joint disease. Besides the aspirating needle, the X-ray is the most valuable diagnostic aid we have. Especially is this true in the clear-cut cases and in those cases where emaciation, sepsis, and toxic symptoms predominate over the gross local findings. It has been noticed in nearly all cases of suspected, and in all cases proven by aspiration of accumulations behind the posterior parietal peritoneum, that there are two outstanding findings in the X-ray plates:

A definite lateral curvature of the lumbar spine with the convexity away from the affected side, and a clouding or haziness, with almost complete disappearance of the angle formed by the shadow of the psoas muscle on the affected side.

This is clearly seen on the X-ray plate of the case, which I shall show you presently. You will notice in the other plate shown, not only an arching of the lumbar vertebra, but also a clear-cut margin of psoas muscle on both sides.

A large hydronephrosis or tumor of kidney may obscure the angle and render hazy the margin of the psoas, but if there is no inflammation there will be no arching of the vertebral column, since nature arches the spine away from the lesion to relax the tension on the inflamed area.

Both the above findings are seen in the case that was proven by aspiration and drainage of a paranephritic abscess with no urinary findings except a dilatation of the pelvis and calyces. In my opinion, this was due to extra ureteral pressure by the abscess. I see no other reason for the dilatation as no stricture, angulation or kinks were present, and pelvic drainage was prompt when the pressure was removed. The pelvis assumes a more normal capacity as shown by the quantity of fluid it held when later injected.

The case in detail: L. S., male, age 22, single, occupation laborer, referred to me Sept. 30, 1926.

1. Before coming to me he was sent to the roentgenologist for suspected lesion of spinal column or hip joint disease, because of the assumed posture.

2. X-ray report: The X-ray examination of the spine and left hip showed no evidence of pathology in the bony framework, and the intervertebral discs were properly spaced. The right kidney could be fairly well outlined, the left was obscured, no evidence of calculi could be detected. On the left side there was a diffuse area of increased density that extended from the first lumbar vertebra to the crest of the ilium. The shadow of the left psoas muscle was entirely obscure.

Discussion: Findings were inconclusive, but I was suspicious of some pathological condition in the region of the left kidney, probably an abscess.

3. The patient came into the office presenting a picture of a very sick man, thin, dry skin, stooped forward, and laterally, favoring the bulging in left side and back. I aspirated through a large needle, drew off some dark clotted blood. I advised that he go to the hospital. Five days later he entered the hospital.

Chief Complaint: Fever, loss of weight, and lump in left side and unable to straighten up while walking.

Present Illness: The patient stated that about ten weeks before he lifted the end of a truck, strained his back severely, had a sharp pain, which soon passed off, but was left with some tenderness in left side and hip joint when he walked. He continued with his work, paying little attention except possibly favoring the left side because of tenderness and soreness. In three or four days, he noticed a little more stiffness and, on feeling of his side, noticed a fullness or lump in left back. He continued at his daily duty for two or three days, when the mass became very tender. He was now having fever. He did not remember having had a chill, but had marked loss of appetite, and loss of weight. The fever ranged from 100 degrees, continuous in type.

He had had the usual mild diseases of childhood, nothing serious, no venery; was a prize fighter in past, but had not appeared in the ring for two years.

Urological Examination: Had passed no blood in urine, no gravel, and the urine had always been clear. With the finding of a mass in his side, I decided to cystoscope and pass catheter up the ureter to determine the function and status of kidney and pelvis. Bladder was found normal. Ureters easily catheterized, urine from both sides clear, function normal. I injected 12 c.c. of sodium iodide into the pelvis of left kidney. A slight pain was produced but unlike the one present.

X-Ray Report: Pyeloureterogram made. Plain film with catheters in place, no evidence of calculi, kidneys not seen. Pyelogram of left side showed the renal pelvis to be markedly but evenly dilated. The calyces were clubbed; the superior major calyx was also dilated. There was a slight constriction opposite the third intervertebral space. The characteristics of hydronephrosis of left kidney pelvis.

Examination at Hospital: Temperature 100, respiration 25. Adult male, age 22, lying in bed with definite posture as if favoring left side, with knee flexed on abdomen, pinched facies, emaciated and very dry skin, the picture of toxemia and dehydration. Marked loss of subcutaneous fat. Lungs normal, heart rapid rate, otherwise normal.

Abdomen: There was a rounded prominence extending from left nipple line and upper left quadrant, which continued backward and downward, filling the entire left quadrant posteriorly. There was a firm, tender, almost hard mass extending downward to Poupart's ligament, covering the iliac crest, and its anterio superior spine, the anterior border being fairly sharply defined. There was no definite fluctuation of the mass, but marked tenderness over the center. Right leg negative, left leg flexed on abdomen, but patient was unable to extend leg and thigh because of the pain when psoas and abdominal muscles were put on tension. External genitalia normal, urine clear but concentrated, microscopically negative. Prostate and vesicles normal. Wassermann and malarial smears negative.

Blood count 14,000. Polys. 83%. Urea and creatinin slightly elevated.

Conclusion: Paranephritic hemorrhage, probably abscess. The operation: Under 1 per cent novocain anesthesia, I made a low incision in back, found the inflammation extending between muscle fibers and fascias. By blunt dissection, an abscess was entered from which flowed large quantities of pus with colon bacilli. A large split tube was inserted. Temperature went down and patient made an uneventful recovery and left hospital on sixth day.

Follow-up History and Examination: Three months ago showed no recurrence, and he has been free of any symptoms of previous trouble.

DISCUSSION

Dr. Louis Orr, Orlando:

The mode of origin of paranephritic and perinephritic accumulations of fluid has always been of great interest. I would like to read an extract of a recent communication on the subject of pyelovenous backflow which bears out a very interesting relation to this particular subject, as follows:

"The author refers to a previous article (same Journal, vol. 22). In pursuance of his study of pyelovenous backflow in the human kidney, recent investigations by the author on the fibrous renal capsule have acclaimed the thought that in the heretofore unexplained picture of the 'perirenal hydronephrosis' or of the perirenal hematoma or abscess, the effect of an excessive increase of the pressure in the renal pelvis is involved. In nearly all cases of this process, preceding renal colics or hydronephroses were mentioned so that clinically also a connection between the causative increase of pressure in the renal pelvis and the perirenal exudate is probable. The author explains the fact that in the exudate only small quantities of urea are demonstrable, as being in accord with experimental investigations, and as being due to the fact that the course which the fluid from the renal pelvis follows through the renal parenchyma is very narrow and has a tendency to become occluded. In the case of repeated carrying out of the pressure experiment the fluid frequently looks for a new channel and does not follow the old one which has already been formed."

Would it not be interesting to see pyelograms and ureterograms on all patients with extra-renal abscess taken at a time antedating the common complaint of "back injury" and the onset of clinical symptoms? Perhaps there might be found some condition present that might contribute to the production of an increase in pelvic pressure, thus causing a seepage of material through the renal capsule and the formation of a suitable medium for the development of a peri- or paranephritic infection. The history of injury in these cases may be only incidental and a means of the introduction of bacteria in to the area.

Dr. James L. Estes, Tampa (closing):

Thank you.

PYELITIS IN INFANCY*

Douglas D. Martin, M.D.,
Tampa.

My purpose in this paper is not to advance any new theories or to present any new means of diagnosis, but more to bring to your attention a condition which is so commonly met in the practice of medicine among children.

When pyelitis develops from a local cause it is usually unilateral; otherwise both sides are involved. In the cases of acute pyelitis there are the usual appearances of an acute catarrhal inflammation of the mucus membranes with congestion, swelling, and sometimes, minute hemorrhage. There may be an accumulation of pus of considerable quantity distending the pelvis with a resulting "pyonephrosis." In most severe cases of pyelitis there is also present a certain amount of pyelonephritis. The extent of the nephritis will depend upon the exciting cause and the duration of the process.

I have selected a series of seventy-five cases that we have treated in The Children's Clinic, in the past two years. In this series we have had one male child. The ages have been from two months to eleven years.

The blood picture in this group of cases has not been entirely significant of pyelitis. In relatively severe cases, we have found the leukocyte count nearly normal, with a normal poly count. In cases that we regarded as rather mild, the count was much higher in proportion than in the severe cases. The blood pictures have certainly not been a guide to the prognosis in any of our series.

The amount of pus found in the urine in one, two, three or four specimens will not, in every instance, give you any clue as to the extent of the infection. We had several cases in this period with large quantities of pus, practically no elevation of temperature, which we regarded as a simple cystitis, treated as such, with a complete recovery. We demonstrated with X-ray findings, what we concluded a normal genito-urinary tract with the exception of the bladder where on cystoscopic examination we found a simple cystitis.

In the cases mentioned, there was one child with abscess of the kidney, which was proven at autopsy. I mention this case because it was admitted to The Children's Hospital with the diag-

*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

nosis of pyelitis. On X-ray examination, the diagnosis was changed.

If it was possible for us to have a thorough X-ray study of all cases of pyelitis with which we come in contact that are not readily cleared up by the usual methods, I think we would in many instances see congenital anomalies of the genito-urinary tract.

I do not believe all cases are primarily caused by foci of infection. I think congenital malformations might play considerable more of a part than we think, along with stones in the genito-urinary tract. The sinuses and tonsils are probably heading the list as causative factors, with localized foci of infection anywhere in the body, as sinus infections, which we have demonstrated in several of these cases. One case where a diagnosis of pyelitis had been made, on admission to The Children's Hospital, we found a congenital condition. A small atrophic kidney on one side and large pyonephrosis of the other kidney. An autopsy was performed on this case.

The diagnosis of pyelitis is not always easily established. Pyelitis is probably confused most often with appendicitis and pneumonia. To differentiate these conditions is not easy. Here again X-ray with catheterization of ureters will be of aid in establishing other diagnosis. The catheterization of the ureters is a very valuable adjunct in the treatment of pyelitis where a kidney block occurs. We resorted to this method in several cases in the above series, with most gratifying results.

The treatment of pyelitis is justly a much-discussed and debatable subject. We all agree on one point and that is the fluid intake. As much fluid should be given as safe with the fluid balance of the body, not to the point of water logging, but the intake and output should be watched and a copious output of urine is desired, with free drainage of the kidneys, and administration of alkalis. Pyelitis will usually be under control in from ten days to two weeks. On the other hand, the cases that do not drain well and become toxic, and in which it is not possible to get the required amount of fluids, will probably have to be handled differently.

First: The thorough irrigation of the bladder with warm boric solution, repeated daily or every other day until a copious flow of urine is established.

Second: Intravenous injections of urotropin daily or every other day. Of course this is done in the presence of an acid urine as is nearly always had. The dose of urotropin is graduated by the age of the patient.

For convenience of administration, we have been using urotone as it is already prepared in ampules. We have had no untoward results following the administration of urotone. We recently saw a five-year-old girl who had been given twenty-five grains urotropin daily, by mouth, and her urine was showing 4 plus blood, no other pathological findings. We stopped the urotropin, the blood cleared in four days and then the pus was found. This was an old case of pyelitis that I had seen on several occasions before. I believe the urotropin was the causative factor in this case of blood in the urine. Many cases of pyelitis are readily cleared up with the administration of alkalis and fluids.

All cases of pyelitis have a tendency to recur. Not all cases have a tendency to chronicity—a large per cent do. As a rule the first attack causes the most alarming symptoms and is harder to control.

Of the preceding cases, there are two that still have abundance of pus in the urine, in spite of tonsillectomy and the routine treatment over a considerable period of time. We have been unable so far to obtain a cystocopic and an X-ray study of these two cases.

There are about ten cases in this series that we see from time to time, with acute exacerbation, that as a rule have temperature for two or three days and will run pus for ten days to two weeks. These cases we treat with urotone intravenously and they do well on this line of treatment.

I have purposely refrained from discussing capricol. and vaccines in the treatment of pyelitis on account of the toxicity of capricol. Children apparently do not bear it well; certainly that has been our experience. The vaccines have not met with much success with us. The preparation and manufacture is not simple. It takes too long to make a vaccine. In the cases on which it was used, we noticed no marked improvement.

DISCUSSION

Dr. J. D. Love, Jacksonville:

Just a few years ago, one of the most frequent medical errors consisted in overlooking cases of pyelitis. But since the condition has become so generally recognized, at the present time the prevailing error probably is in diagnosing pyelitis when it does not exist. In fact, the pendulum

has swung to such extent that almost every case of pyuria is diagnosed pyelitis and treated as such.

I believe that most cases of pyelitis respond readily to the alkaline treatment, such as the use of bicarbonate of soda or citrate of potash; failures to secure results are in most cases due to insufficient dosage to render the urine alkaline. We must bear in mind that in pyelitis the urine is usually highly acid, and more of the alkaline salts are needed to render the urine alkaline than under normal circumstances. The amount of alkaline salts needed can be determined only by a daily test of the urine for its reaction, and whatever dose is being employed is insufficient so long as the urine remains acid.

There are two weak points in connection with the alkaline treatment: First, the tendency to sooner or later produce a gastric intolerance, and, second, the rather imminent risk of exciting an alkalosis. If either of these conditions is noted recourse must be had to the use of urotropin. On the other hand we know that the prolonged use of urotropin will lead to hematuria, just as the continued use of alkaline salts leads to alkalosis. I am sure I have precipitated both these conditions, due to failure or inability to keep in daily contact with my patients.

Since urotropin is well tolerated by the stomach, I have never had occasion to resort to intravenous injection of this remedy.

Dr. G. S. Osincup, Orlando:

This paper, I think, is of as much interest to the men of general practice as to the pediatrician, because I am firmly convinced that a large number of cases of pyelitis that occur during pregnancy and immediately after delivery of a child, have dated right back to the first year of life, that this infection had its beginning when the child was still in diapers and proceeded until pregnancy. We often see these cases which are still hanging over.

A very significant fact to me was the statement in Dr. Martin's paper that there was but one boy in a series of 75 cases that they had. He also made the statement that sinus infection and tonsil infection headed the list as causative factors in pyelitis. These two statements do not reconcile themselves to each other, because these two conditions are just as common in boys as girls.

The X-ray in the treatment and diagnosis of pyelitis in my opinion is of extreme importance. You can determine conditions that you can tell in no other way than by the X-ray. Cystoscopy in pyelitis in children is important as well in treatment as diagnosis, but it is exceedingly difficult to get parents to agree to cystoscopy. In the first place it is quite expensive, and then, too, the child must take an anesthetic and probably be ill for 24 hours. If the children are comparatively well, the parents fail to see any reason why they should go to that expense and subject the children to the pain and discomfort of cystoscopy. They should have it done nevertheless, and the results will be well worth while if they can be convinced of the necessity.

I agree with Dr. Love that alkalinization is the best treatment, and it is my habit to give the mothers of these children litmus papers, show them how to make the test, and instruct them to give the children as much alkaline as necessary to keep the urine alkaline throughout the course of the disease and for some time thereafter.

Dr. Douglas D. Martin, Tampa (closing):

Thank you.

SOME TONSIL PROBLEMS*

L. C. Ingram, M.D.,
Orlando.

A number of years ago, Waldeyer described a chain of lymphoid glands surrounding the pharyngeal opening to the food and air passage. This chain is well demonstrated whenever enlarged through infection. This fact of their close association and possible multiple infection requires a most careful consideration when examining the tonsils for a possible source of infection. Attention is too often given only to the palatine tonsils and possibly the naso pharyngeal or adenoid. The tubal or posterior pharyngeal and the lingual tonsils are many times the seat of focal infection. Many such cases are to be seen where palatine tonsil and adenoid have been removed and the patient continues with his trouble. On examination we find an enlarged lacunar set of tubal tonsils or possibly the same picture in lingual tonsils and through a careful removal of these tonsils relieve the trouble.

There has been during the past years a number of theories advanced to explain the physiological role of the tonsils. Gradually theory has given way to fact. First, the experiments of Lenart suggested that the tonsils were not interceptors

*Read before the Orange County Medical Society, Orlando, Nov. 29, 1929.

or receptors of a lymph circulation as happens in the ordinary lymph gland; that they did not stand guard over the food and air passage by receiving and neutralizing poisons; that possibly they formed antitoxins for the body protection. Then came the experimental study of Schlemmer of the Hajek Clinic during the past two years that proved the movement of the substances in the tonsils to be efferent and to the regional lymph glands. This gave the foundation for a fact on what had been a theory that infections established in the tonsils flowed out first to the near lymph glands, then on to other organs or tissues of the body. This fact had been recognized clinically for a number of years and had been described as focal infection.

FOCAL INFECTION.

About seventeen years ago, Billings of Chicago read a paper setting forth a wealth of clinical and laboratory experience that at once gave this idea a fact for sound and substantial existence. It at once changed much of our plan in examination to arrive at a diagnosis. There was a laboratory technician associated with Billings at the time that may have been responsible for some of the discoveries made. Rosenow later in the Mayo Clinic continued these experiments with bacteria from infections, proved in many cases that when injected into animals, produced like lesions and was the basis for the theory of elective localization. A long list of animal experiments were carried on by Rosenow securing the bacteria from foci of infection, as teeth, tonsils, etc., and proved that they produced lesions in other organs and widely different structures of the body. It was the foundation for what American practice has accepted as focal infection. It was not accepted in Europe, only in part, except by the British Isles.

We understand focal infection to be the growth of bacteria in circumscribed confined colonies in certain tissues of the body and carried from there by blood or lymph to other tissues and there produce inflammation or even a general lowered vital resistance. There are two prime factors always to consider in such a study. First, the activity of the bacteria and second the resisting power of the individual to this strain of bacteria. The etiology of a focal infection must necessarily be guided through a careful consideration of these two factors. This it seems to me is proof of the need for a general medical survey of every patient presenting evidence suggestive of systemic disease of focal origin. Such a survey will include a carefully taken history, a competent physical examination and such laboratory procedures as are indicated. In this way the possibility of systemic diseases being related to a focus of infection can usually be determined and the relative importance of the different factors be settled. The internist is constantly seeing patients who have suffered at the hands of specialists for a lack of such a survey as mentioned and sometimes a haphazard therapeutic procedure is undertaken or carried through by the internist without a clear perception of the problem in hand. We must all keep in mind the ever-present possibility that a case presenting all the common symptoms of focal infection may not be focal infection at all. Every member present I believe realizes the fact that it requires the most mature clinical judgment to solve some of these problems; a team effort if we are to avoid some of the snap diagnoses and reckless surgical or haphazard therapeutic procedures. "Horse sense" is sometimes a saving attribute to even a physician.

It is my habit to be guided not a little by age periods when determining whether or not the tonsil is probably the guilty one. Under twenty, the infection is most apt to arise from lymphoid tissue. Hence I would look first to tonsils, then sinuses. Above twenty, a broader view must be taken and other possibilities considered, though even then the trio, tonsils, teeth and sinuses, will account for by far the greater number. The tonsils if they have not been removed may be a focus at any age and must not be eliminated because there is no history of acute attacks of sore throat. We can be guided to a considerable extent by the type of disease present. Thus, acute rheumatic fever, chorea, rheumatic endocarditis, myocarditis, acute glomerular nephritis all are most apt to be secondary to the infection in tonsils.

Some writers I have consulted claim that as high as sixty per cent of acute tonsilitis has at the time or are followed with albumen in the urine. The greater number of patients under twenty with albumen in the urine, remaining for some time, are relieved by removing the tonsils.

THE SIGNS OF DISEASED TONSILS.

In the past, there has been no small amount of confusion as to what would constitute in size, shape or color a diseased tonsil. Gradually certain signs or appearance have been universally

accepted and today constitute the guide for clinical diagnosis.

There are two factors in size and shape. One the large pedunculated tonsil, the other small buried tonsil. The former usually is not responsible for a focal infection but a detriment to health by reason of obstruction. The latter usually is the offending organ in focal infection. Many times a phimosis is just about complete and the lacuna are so covered there is no chance for drainage out into the throat. A few years ago, Lott gave a paper calling attention to his observation on several hundred cases in which he removed the tonsils as the source of certain systemic infections. He described two distinct types of redness of the anterior pillars of the fauces. One had a narrow, sharp defined red line, the other a broad red pillar and fauces. To the first he attributed the streptococci and to the latter staphylococci. In his experience the former were responsible for rheumatism, albumenuria, etc. The latter condition was not so often associated with grave systemic conditions. These symptoms have been generally adopted as the standard and most reliable local sign of the tonsil being diseased.

With adults we are often able to pull the anterior pillar forward and by pressing on the tonsil express a thin pus from the upper crypts of the tonsil. This indicates an infection, but in my experience such tonsils removed do not, if not red, give such benefit as comes on removing the tonsil with the red pillars. For many years I clung to the belief that cultures from the tonsil gave valuable information but have abandoned this. I was never certain that it was any more than the regular flora of the mouth and was glad to accept the conclusions of careful students who pronounced it of no value.

The final decision of whether the tonsil is acting as the primary portal for the systemic infection must be arrived at through a process of elimination and not a hasty diagnosis from appearance of the tonsils alone, if we are going to do most for our patients and avoid some of the criticism. To arrive at this intelligent conclusion it means there must be cooperation between specialist and internist. After this careful examination and the diagnosis settled, the treatment is surgical.

SURGERY OF THE TONSIL.

It is reported that the tonsil operation constitutes half of the surgery in some of our general hospitals. Much criticism has been offered in late years concerning this operation as now handled, some speaking of it as the slaughter of the tonsil and some surveys, it would seem, furnish enough proof, as that of the Mayos, to have it appear there is much reckless surgery of the tonsil. Other surveys are being conducted at the present time by groups competent to determine what is good and bad and will, I believe, be of benefit to standardize the indication for this operation and discourage some of the amateur surgery that is responsible for so much that has brought about the criticism.

The operation as performed today is almost entirely of American origin and the standard instruments were designed almost entirely by American throat surgeons.

There are three standard methods used in North America to do a tonsillectomy. First, dissection and snare; second, the guillotine; and third, complete dissection. Different operators modify or combine these according to their own notion or temperament. Superiority is claimed for each method by some one, but we know the method does not count so much as the training and skill of the operator. If real surgical principles are used by experienced hands the results are going to be much the same. Some of you men have had the experience of visiting a clinic some time and observe a very skillful operator perform and you were induced to buy his set of instruments in order to do as he did. You later found you could not use them without putting yourself through the same training course he had done. This reminds us that it takes patience and study to develop skill in this operation.

Dissection and snare is the more universally used method in America. Dr. Oliver Tydings of Chicago did the first tonsillectomy as a dissection operative procedure in 1901 and established the operation for all time, as stated by Dr. Greenfield Sluder in an article in the Journal American Medical Association, December 30, 1915. Dr. Tydings used a blunt hook and snare at the time; later he perfected a curved knife and the regular pistol grip snare. I was a student under Tydings at about the time he perfected these instruments. Later I discarded this snare for the Brown as I felt it was better and have continued to use this snare up to the present.

The guillotine operation was first introduced with a push blade by Physic of Philadelphia in 1827; the pull blade by Fahnestock in 1832.

These operations were merely a tonsillotomy and were the standard until Tydings came in the field in 1901.

Dr. Greenfield Sluder of St. Louis was the first to champion guillotine complete enucleation in a paper before his society in 1910. In the summer of 1912, I was in Chicago making my annual rounds of the Clinics and was privileged to see Sluder demonstrate his operation for two days at the Cook County. I believe most of us who saw the operation forthwith bought one of the new instruments and tried our hand at it and after a few trials most of us went back to the snare if we had been using this.

Removal of the tonsil in its capsule entirely by dissection was first placed on a satisfactory basis by Waugh in 1909 and but little, if any, change has been added since. It is the opinion generally that this method is the most surgical and when done by thoroughly skilled hands gives the most satisfactory results in function of soft parts in the throat and the least amount of second tonsil operations.

There are two methods used in a complete dissection operation, one the curved scissors after opening into the capsule with a sharp knife, the other a blunt dissector after first starting with the sharp knife. In the dissection method the tonsil is usually rolled down from the superior pole, making the separation of capsule of tonsil from fascia of superior constrictor of pharynx. With the scissors it is usual to have considerable hemorrhage that must be taken care of.

Briefly, I wish to discuss the method of removal of tubal, lingual and other small groups of tonsil tissue on the pharyngeal wall. The tubal and lingual can be dissected, but I believe the very best treatment for these and the smaller particles is desiccation, with the high frequency current. This method is gaining rapidly in favor by the profession.

The complications met during or following these operations are worth our consideration. There are two that stand out above all the others: hemorrhage during and following operation and scar tissue and contractions of palate and pharynx that follow some operations. Some patients have died from hemorrhage and many have been made anemic for months, the result of the hemorrhage during or following operation. Many patients are miserable, the result of scar tissue and contractions of soft palate pillars and pharyngeal wall. It must be admitted that trouble is encountered at times from the operation by the most skilled operator. It is, however, more often the result of the unskilled. Reckless wounding of the soft palate, the posterior pillar and tongue account for by far the greater amount of difficult hemorrhage and scar tissue contractions.

Four years ago I placed before most of the men in this society the features of a bloodless tonsil enucleation I was doing. I claimed for it the nearest bloodless removal of tonsils so far devised, less reaction and pain following operation and less scar tissue and contraction. Those who have seen me do the operation have been impressed with the bloodless feature and the perfect appearance of the tonsil fossa. Usually the question asked is: can you do them all that way? This I had to admit in the negative and became interested to determine the extent of success for my own satisfaction.

This summer I went back over the records for the past four years and found that there were more than a thousand operations. For two years Dr. Johnston was associated with me and did some of the operations. Most of the records did not state the method used. For the past year and a half the records have been kept stating the method of operation and what if any complications arose. Of these I selected the last three hundred operations and divided them into periods. First, those twenty years and under and second those over twenty years. Of those twenty years and under I was able to do 91 and a fraction per cent the bloodless method. Eight and a fraction dissection and snare. Patients over twenty years I was able to use the bloodless method in seventy-six and a fraction per cent. This we can understand when we remember that the older patients have more phimosis, abscess and other inflammation causing adhesion of capsule to fascia of the muscle.

For two years I have had but three patients operated bloodless that had any hemorrhage after being put to bed. This is a striking contrast to the usual dissection or snare operations. This success is partly due to a technique used for two years of ironing out into place the fascia of the tonsillar fossa. In this operation the plica of both tonsillar pillars is preserved, a condition well established as giving best results and least liability of scar tissue. For the past year I have included in the operation the removal of lower plica triangularis and the collection of lymphoid tissue including lingual. This careful shallow

removal gets rid of a possible focus of infection and prevents the complications that follow where the tongue or pillar attachment is wounded.

SUMMARY.

Briefly I may say that too often not enough consideration is given to the fact that there is a ring of tonsillar tissue in the throat. For this reason many times some smaller groups of tonsillar tissue continue to furnish the poison we planned to remove with the palatine tonsils.

Focal infection of tonsillar origin is an established fact. To establish the diagnosis of diseased tonsils in a sound practice requires more than the snap judgment of either the internist or the laryngologist.

Good surgical removal of the diseased tonsil in the early stage cures the disease and prevents the preventable complications of the operation.

SOME OBSERVATIONS ON THE TREATMENT OF COMPOUND FRACTURES*

CHARLES MABRY, M.D.,
Jacksonville.

Before the days of Lister, appalling as it may seem, the accepted method of treating compound fractures in long bones was by amputation. The advances made since that day speak eloquently for themselves, but the final word as to the management of these cases has certainly not yet been spoken.

There are a good many methods of treating compound fractures, and some clinics are reporting excellent results from each method. In compound fractures, attention must be centered on several conditions. The patient may be in a shock, fragments of bone may be protruding, circulation may be seriously impaired by pressure of overlapping bones, or some misplaced bony fragment may have punctured some large vessel. There is always devitilization of the soft tissue which requires utmost care and attention, for the treatment accorded here will determine largely whether or not the wound will be clean or become infected. Stern of Cleveland has reported excellent results from simple immobilization and sterile dressings to the wound. Reductions are not done until the eighth day. Sherman of Pittsburgh has gone to the other extreme. He assumes that all wounds are infected and does a clean dissection of devitalized tissue followed by an internal fixation of fragments. His aftercare consists of dakinizing regularly. He, too, reports excellent results.

However, the generally accepted routine treatment seems to be wide open debridement of bruised tissue, douching with modern antiseptics, and half closure with drainage by leakage and, of course, immobilization. Of the value of a thorough cleansing there can be no doubt, and the mechanical part called debridement is of chief importance. The next step is douching with a sterile solution, normal saline, etc., and finally, subsequent loose closure of the wound. This procedure in a good majority of cases will give a clean repair. The doing of internal fixation in compound fractures by plates and bands, etc., if needed, may come later.

It has been my pleasure to be assistant to the Orthopedic Service of the Duval County Hospital for the past two years. I have collected a series of 24 cases. The end results of almost all of these cases was firm bony union with good function. The general hospital routine treatment was immobilization of the affected member with some form of traction. The follow-up work has been done almost entirely by the hospital's outpatient department. The method of wound treatment has been divided into three classes:

1. Debridement within 24 hours; that is, by wide-open removal of devitalized tissue; cleansing with modern antiseptics, and closure with drainage by leakage.
2. Application of modern antiseptics and sterile dressings.
3. Foreign body drainage of wounds of extensive tissue destruction—i.e.: vaseline or mercurochrome packs or by rubber tube drainage.

Of the 24 cases of this series, 7 were treated by debridement, 13 by aseptic cleansing but not by debridement, and 4 were treated by mechanical drainage method—i.e.: by rubber tubes, vaseline or mercurochrome packs. These cases usually had extensive tissue destruction. A comparison of the number of hospital days is interesting. The debridement method had the lowest number with the average of 36½. The next to the lowest was obtained by the aseptic dressing method without debridement, with an average of 67½, or almost twice as many as treated by debridement. The treatment by drains and packs average about 71¾.

*Read before the Duval County Medical Society, Jacksonville, May 7, 1929.

Two cases of gas infection occurred, both following aseptic dressing treatment. In one, immediate amputation was done and the patient was discharged on the 72nd day. In the other, gas infection was treated by extensive linear incisions deep into tissue. This case also promptly improved, but later developed an extensive osteomyelitis which resulted in death on the 64th day. Three cases of chronic osteomyelitis also followed the aseptic dressing treatment, which prolonged their hospital days.

In summarizing:

1. A comparison of the hospital days show: for debridement, 36½; for aseptic dressing, 67½; for methods of drains and packs, 71¾. Debridement lessened the hospital days by one-half.
2. Two cases of gas infection and three cases of osteomyelitis developed in the aseptic cleansing treatment, while in the treatment by early debridement no infection developed.

MYXO-SARCOMA*

R. F. Godard, M.D.,
Quincy.

In presenting this paper today I do not claim to introduce anything new to medicine and surgery. I only ask permission that you bear with me in reporting an unusual case of pathology.

For my pathology, histology and history of this subject I am indebted to Dr. James Ewing in his recent work entitled "Neoplastic Diseases", published by Sanders of Philadelphia in 1928.

I have also quoted to some extent from Bland-Sutton in his discussion of this same subject found in his article, Keen's Surgery Volume One (1).

Myxoma.

Myxoma is a tumor composed of mucous tissue. Primary myxoma, a tumor which probably arises from embryónal mucous tissue, is rare, but mesoblastic tumors, such as fibroma, lipoma, and chondroma, which contain myxomatous portions are not infrequent. It is often difficult to determine whether the myxomatous portion of a complex tumor is originally of this type or represents a degeneration of the more adult tissue. In the former case one employs the terms 'Myxofibroma', or 'Myxolipoma'; in the latter case the myxomatous degeneration is indicated by the suffix myxomatodes, as chondroma myxomatodes.

When mucous tissue is present in a neoplasm three possibilities as to its significance must be considered. The mucous tissue may be developed directly from embryónal mucous tissue and the tumor may be a primary myxoma. Or the tissue may represent a metaplastic product of other tissues and the tumor is a secondary myxoma. Or the tissue may result from chronic edema of other structures and represent a form of spurious mucous tissue, such as is seen in edematous nasal polyps and in atrophic fat tissue. These theoretical deductions cannot always be established in the practical examination of tumors.

Since mucous tissue does not exist in the adult body, a primary myxoma, according to the above definition, must be rare and always embryónal. It does not appear that pure myxomas ever tend to differentiate into fibroma or lipoma.

Virchow considered myxoma to be very closely related to lipoma and as occasionally arising from embryónal fat tissue.

Anatomical Characters.

Myxomas are soft, lobulated, polypoid, or papillary tumors, which on section are smooth, translucent, and gelatinous. The encapsulation of myxomas is seldom complete, the mucinous material tending to infiltrate surrounding tissues. On this account complete extirpation is sometimes difficult and recurrence follows from persistence of widely disseminated mucous material and cells.

Structure.

"The structure of myxoma presents typical features of spindle- and star-shaped cells with processes anastomosing or disappearing in the matrix, and cytoplasm usually containing fatty and watery droplets. Hydrópic degeneration may be extreme in edematous tumors."

Myxomatous tissue is often combined with fat tissue, cartilage, bone, or other neoplastic elements.

The Clinical Course.

The clinical course of myxoma is of a slowly growing tumor which produces no symptoms except local swelling and pressure. After complete extirpation they do not recur, but thorough removal is not always readily accomplished and local recurrence of this benign tumor is not un-

*Read before the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, Quincy, May 10, 1928.

common. In the skin and nerve trunks they are frequently multiple, and new tumors develop after extirpation of the old. Yet Virchow refers to 2 cases of myxoma of cheek and of labium, which recurred after operation and eventually produced many myxomatous metastases. As a rule, malignant myxomas fall readily in the class of myxosarcoma.

Etiology.

"In the etiology of myxomas special factors must be considered for different groups and an etiological classification becomes of interest."

"A congenital origin has been established for myxomas of the navel which probably arises from foci of umbilical cord tissue, and for the mesenteric tumor described by Borst."

"Special embryonic disturbances do not seem to be connected with myxomas although Marchand suggested that abnormalities in the construction of the cardiac septa might be responsible for myxoma of the endocardium. Chronic inflammation and edema lead to the growth of myxomatoid polyps of mucous membranes. Finally, in the testicle, spermatic cord, and possibly in the kidney, myxomas are probably of teratoid origin, and in some other regions, as parotid, breast, they represent mixed tumors."

Complicating Features.

"Myxosarcoma: Areas of secondary myxomatous change are frequently seen in forms of ovarian sarcoma. They occur about the blood-vessels and lymph-vessels, especially of fibrosarcoma, and sometimes become so prominent as to call for the designation of myxosarcoma. Yet such cases are rare. Ségalówitz found only one largely myxomatous tumor among 399 from the ovary, and Kroemer states that a pure myxosarcoma of the ovary does not exist. An interesting observation is that of Walter, who records 3 fatal myxosarcoma in sisters."

Mucous degeneration is a widespread and important regressive change in many tumors. It may be a primary and essential feature of the neoplasms, arising from exaggerated developments of the mucous constituents or from increased secretion, or it may overtake tumors whose cells have no original tendency toward its production.

Adenoma of the ovary may yield cystic tumors of very large dimensions composed of cysts distended by fluid containing large quantities of pseudomucin. Actively growing lipomas are occasionally overtaken by diffuse mucoid degeneration.

Bland-Sutton in his discussion says, "The heart is, of all the organs of the body the least liable to tumors, primary or secondary, yet the few examples of primary tumors which have been observed in it are described by the reporters as fibromata, or myxomata, or fibromyxomata. Nasal polypi; Tympanic polypi; similar to vitreous body in eye are characteristic. The fluid contained in the loculi of ovarian adenomata is identical in its physical and chemical characters with mucous. Occasionally it is as thick and tenacious as jelly. It is no uncommon thing for a loculus of an ovarian adenoma to burst into the belly. When this happens the mucous which escapes is tolerated, but not absorbed, by the peritoneum. When the rent in the loculus is not repaired the glands in its walls continue to secrete, and the mucous accumulates in the belly simulating hydro-peritoneum."

Bland-Sutton further states, "The most typical species of ovarian adenoma may infect the peritoneum. I removed from a woman 51 years of age a typical adenoma the size of a football. Two years later I removed an adenoma of similar size which had grown in the opposite ovary, but it had burst and the belly was filled with colloid stuff. Six years after the second operation this woman came under my notice with her belly enormously distended. On opening the abdomen it was found full of colloid, jelly; the whole of the parietal peritoneum, the uterine surface, the liver, intestines, and omentum were covered with clusters of small bodies amounting to many hundreds. These on mycroscopic examination exhibited the large columnar cells so characteristic of the adenomatous species of ovarian dermoid."

"The patient to whom the above facts relate was alive and well three years after the operation."

"In contrast to this the following facts are gloomy. I have records of three cases in which a tumor to the naked eye and on microscopic examination seemed to be pure ovarian adenoma, but it had burst before removal and filled the belly with the vicious secretion. Before these patients recovered sufficient strength to leave their beds signs of recurrent growth made themselves obvious, and some twelve weeks later the patients died with multitudes of secondary nodules on the peritoneum."

With the foregoing descriptive literature before me I shall report a case which came under my observation and was operated by me in April, 1927.

REPORT OF CASE.

Miss McD., first seen on the 23rd of April, 1927. Age 23, unmarried, white, a school teacher of tall stature and from a healthy family, without previous history of importance except that she had had a tonsillectomy in March, two years previously. Her appearance seemed to indicate a full termed pregnancy of unusual size. Her feet were small, her legs perished in appearance, as were her arms and body except her abdomen. Her face showed signs of having become deprived of the subcutaneous fat and presented a pinched appearance.

Her temperature was subnormal in mouth; her pulse was normal; an examination of her kidneys revealed no abnormality; her heart was pushed well up to the lower edge of the left clavicle. She said that she had no trouble in lying down to sleep; had taught school all the past year and had just suspended the day before. Had suffered one attack of influenza about three weeks previous to this date. When questioned closely she reported that she had been increasing in size for at least two years; was not alarmed until within the past few weeks; that a reputable physician examined her quite thoroughly during the summer of 1926 and had passed her on for college work or study.

I requested the patient to report at the hospital on the next day to be relieved of the apparent fluid in the abdomen and for further study.

On the following day I attempted to draw off the fluid through a medium-sized trocar, but failed until I attached an aspirating pump and then under high pressure I succeeded in drawing out about a pint of a very thick gelatinous, gluey, semi-solid substance which was odorless; was straw-colored shading into a greenish and again clear aqueous humor or vitallin appearing material, with an occasional yellow streak in it; less frequently the consistency would become much more thick and appear as if it were pure mixed pus.

I posted the patient for an exploratory laparotomy on Monday, the 25th of April, 1927. On opening the abdomen every precaution was taken to forestall an attack of collapse or any trouble with the heart or the lungs and the precaution was needed.

Dr. O. W. Gardner, the family physician, was associated in the case and was kind enough to lend any assistance that he could in the matter.

We found the abdomen just as full as it appeared the tissues could tolerate, and on opening it a great quantity of the same characteristic material came rolling out. An examination of the interior of the cavity revealed five large pedunculated multilobular cystic tumors the size of a large grapefruit or coconut. These each had numerous smaller tumors springing off from them and seemingly continuous in capacity on the interior. There were dozens of smaller cysts which seemed to be independent of the larger ones and to be springing from any and all localities of the viscera, from the diaphragm to the cul de sac of Douglas.

Free in the abdominal cavity were several quarts of this same material and it took quite a while scooping it out with my hands and noted that it was not contained in any enclosing cyst or other tissue. In all we removed, I should estimate, between four and five gallons of the jelly-like material which we saved or recovered, not taking into account the quantity lost on the table, the sheets and the floor.

An interesting thing in the appearance of this fluid was that there was not a suggestion of any oil or fat in it. It seemed to be proteid and water in consistency. There was no odor to it, as I have stated before, and there was no blood mixed with it except as I would cut or tear a blood vessel.

The omentum was apparently twisted up and degenerated into a large thickened mass of this same material. It gave one the impression that it had been preserved in a medium of the material and it was as thick as an adult man's hand and increased to the thickness of two inches. It appeared to have retained just enough blood supply to keep it alive. It seemed to serve no function whatever.

An inspection of the messentery to any and all parts of the viscera revealed this alarmingly unusual appearance.

The parietal peritoneum was an amazing sight in that it seemed so thickened and reddened and swollen that it gave the appearance of a very advanced peritonitis of a grave type. It was a sixteenth to a twelfth of an inch in thickness everywhere I examined it and the visceral side of it appeared dinted uniformly as if stamped in

a figure—very similar in size and appearance to the familiar cloth known as bird's eye.

The operation consisted in evacuating those cysts, emptying the abdominal cavity as best I could of the free material, then inserting a cigarette drain into pelvis, up under liver, and one into each of the larger cyst sacks. They were removed at the end of forty-eight hours, and were followed by a moderate amount of dark fluid drainage and particles of that colloidal material.

Immediately after patient was put to bed her pulse began to soar and her temperature reached 105 degrees within twelve hours. However, by the end of twenty-four hours her fever came to within one degree of normal and her pulse dropped to around 120 to 130.

After forty-eight hours gas became more annoying even though she had been able to expel it with comparative ease all the while up to this hour. She had very little pain, only requiring two hypodermics of an eighth of morphine each time in the first fifty-four hours.

The subsequent history of this case was that of progressive seriousness. Her abdomen refilled promptly and became, if possible, more distended than previous to the operation. She lasted in this condition until May 6th at which time she passed away. It might be of interest to state that she had developed five days previous to her death a complete obstruction of the bowels and after this date her condition was typical of that class of cases.

Specimens of this case were reported to the laboratory of Drs. Bunce & Landham of Atlanta, Ga., who confirmed the diagnosis of myxo-sarcoma.

CASE REPORT: BILATERAL RETINAL DETACHMENT COMPLICATING TOXEMIA OF PREGNANCY

SHALER RICHARDSON, M.D., F.A.C.S.,
Jacksonville.

Retinal detachment complicating toxemia of pregnancy is not an extremely rare condition. A perusal of the literature fails to reveal statistics as to its frequency; however, the report of a case, from time to time would indicate that it is not infrequent. Emory Hill[1] reported a case of bilateral retinal detachment in two successive pregnancies before the American Ophthalmological Society in 1923. Scleral puncture was the operation done in this case, and the ultimate result was a loss of vision in each eye. Blake[2] reported a case of bilateral detachment of the retina in a multipara aged 31 years with spontaneous reattachment with subsequent fundus changes which considerably reduced the vision. In all of the case reports reviewed the retina, in addition to the detachment, showed definite pathological changes, viz., edema, perivasculitis and hemorrhages. The most plausible theory as to the mechanics of this interesting complication of pregnancy is that the chorio-capillaris of the choroid secretes a serum which is identical with that serum which is a part of the general anasarca. This serous accumulation acting as a mechanical agent forces the retina away from its normal resting area.

The following case report is submitted for your consideration:

On October 19th, 1927, Dr. S. R. Norris requested that I see Mrs. F. J. M. in consultation. The following history was given: Age, 24 years, primipara of eight and a half months' gestation. Past medical history negative. First seen by Dr. Norris May 16th, 1927, in normal pregnancy and subsequent thereto was seen at intervals of two weeks for urinalysis and blood pressure recording. Until Sept. 24th, the patient's condition was considered one of normal pregnancy. At this time following a motor trip of one hundred miles the blood pressure was recorded as 150 systolic, 80 diastolic. The urinalysis chemical and microscopical was negative. The following day the blood pressure was again within normal limits. Owing to the fact that the patient lived in a distant community she was advised to return home and place herself under the care of her family physician for frequent blood pressure and urine examination. This she did, stating that she was assured by her physician that her condition was satisfactory. On or about October 3rd patient noticed spots before eyes which increased and one week before entering hospital her vision was noticeably dimmed in both eyes. Following a motor trip lasting four hours she was admitted to St. Luke's Hospital, October 16th, in a semi-comatose condition. There was a generalized edema. Blood pressure recording was systolic 200, diastolic 130. The urine showed albumin 4 plus and was loaded with hyaline casts. A Voorhess bag was inserted and 12 hours later the patient was delivered of a normal premature 8½ months' girl baby. (The obstetrical convalescence was uncomplicated, the edema rapidly dis-

appearing and the blood pressure and urine returning to normal after a few days.) On October 19th, the day following the delivery, the following ophthalmic notes were recorded:

Vision of the right eye was the ability to count fingers at one foot. Objects were not seen in the upper field of the right eye, while the reverse was true of the left eye. The external examination of the eyes was negative except for a bilateral deepening of the anterior chambers. The ocular media were clear. Ophthalmoscopic examination revealed the following:

Right Eye.—The nerve head was normal in color, but there was a slight obscuration of the margins. There was a slight loss of retinal reflex adjacent to the optic disc indicating a mild degree of edema. The retinal vessels were normal in appearance and there were no hemorrhages observed. Below the optic disc an extensive globular detachment of the retina was seen. This extended from a distance of two disc diameters below the nerve head to the ora serrata, the upper margin of the detachment being horizontal. The detachment came well forward, the apex of it measuring eight diopters with the ophthalmoscope. The detached retina was grayish in color, but the vessels were much darker than normal. A slight wave-like motion could be detected when the eyeball was moved.

Left Eye.—The nerve head was normal in color, but there was a slight obscuration of its margin. There was a mild degree of edema adjacent to the optic disc. The retinal vessels were normal in appearance and no hemorrhages were observed. Beginning about one disc diameter above the nerve head a globular detachment of the retina was seen. This extended to the periphery, the lower border assuming a horizontal position. The retinal detachment came well forward, being seen best with a twelve diopter lens reading of the ophthalmoscope. The detached retina was grayish pink in color, but the vessels were much darker than normal. A slight wave-like motion could be detected when the eyeball was moved. In view of the generalized edema a diagnosis of bilateral serous detachment of the retina was made. The following treatment was recommended and carried out: rapid dehydration of patient, absolute quiet in bed and atropine sulphate one per cent gtt. No. 1 in each eye ti. d.

The following day ophthalmoscopic examination of the right eye showed that the detachment had increased its area, it now involving practically the entire retina except for a small area immediately adjacent to the optic disc. The vision was reduced to light perception. Ophthalmoscopic examination of the left eye showed that the detached area had increased, and that it now involved the upper half of the field and extended well down the temporal side. The vision of the eye was reduced to light perception.

In view of the rapid progression of the detachment in each eye immediate surgical interference was urged. On the afternoon of this date I performed under local anesthetic a combined scleral trephine and chorio-dialysis of both eyes. The method of procedure was as follows: After exposing the sclera through a conjunctival opening a disc of sclera 1.5 mm. was removed with an Elliot trephine. With a small spatula the choriod was separated from the sclera through the trephine opening for a distance of eight to ten millimeters. A small opening was then made in the choriod several millimeters from the scleral opening with a spatula, being very careful not to puncture the retina. As the opening was made through the choriod a gush of straw-colored fluid was seen. The wound of the conjunctiva was then closed with three number one silk sutures. In each instance the trephine opening was made as nearly over the apex of the retinal detachment as possible and about ten millimeters posterior to the limbus and between the muscles. A dressing was applied to both eyes and a rather snug bandage made. The post-operative care was a continuation of the dehydration, absolute quiet in bed, the patient remaining on her back. Sufficient opiates were given to insure quiet. Two days later the first dressing was made and atropine instilled. The fundus was not examined at this time. On the fourth day examination of the fundus showed a completer reattachment of the retina of both eyes. The stitches were removed on the ninth day. The patient was kept on her back for a period of one week and in bed for a period of three weeks. She left the hospital twenty-four days after the operation at which time the reattachment of the retinae were holding and the vision with the lenses she had formerly worn was twenty-fortieths in each eye, and the fields of vision for form were normal. Except for a slight pigment disturbance in the macular region the fundi were normal. The patient was last seen December 31st, at which time with the following lenses the vision was twenty-thirtieths in each eye. Right eye plus four sphere equals

twenty-thirtieths. Left eye plus four sphere equals twenty-twentieths. The fields of vision were normal. The fundus was as noted above.

Spontaneous cure of retinal detachment complicating pregnancy is occasionally mentioned in the literature. However in view of the fact that the retinal detachment in this case increased following the emptying of the uterus we were faced with the problem of using the best means at our disposal for restoring the retina to its normal position. Meller's chorio-dialysis affords removal of the fluid which mechanically prevents reattachment and furthermore forms a permanent filtration area. For this reason I elected to do a chorio-dialysis.

Countless surgical procedures are suggested for the treatment of retinal detachment with uniformly poor results. This case is presented to you not with the thought that one or two perfect results acclaim an operation as the one of choice but merely for the purpose of suggesting this procedure in detachments of a similar type and adding this case to the literature.

REFERENCES.

1. Hill, E.: Bilateral detachment of retina in two successive pregnancies. (bibl.) Arch. of Ophth., 1924, v. 53, pp. 137-141. (dis.) Trans. Amer. Ophth. Soc., 1923, v. 21, pp. 194-198.

2. Blake: Bilateral detachment of the retina in nephritis of pregnancy, reattachment of retina. Arch. of Ophth., 1922, v. 51, p. 586.

A FURTHER OBSERVATION OF HYSTERECTOMY AND REMOVAL OF THE FETUS AFTERWARDS—A REPORT OF TWO ADDITIONAL CASES*

J. S. Turberville, M.D.,
Century.

Case No. 3.—N. McC., colored, age 22, brought to the hospital by Dr. A. P. Webb of Atmore, Ala., May 4, 1928. She had been in the hands of a midwife until Dr. Webb had been called. He discovered that she had a great contraction in an anteroposterior direction; scarcely two fingers could be gotten between the promontory of the sacrum and the symphysis pubis. No fetal heart sounds could be heard by Doctors Webb and Gachet, nor any fetal movement elicited by any of us. The patient was very much exhausted from prolonged labor, and altogether was a very poor prospect. No laboratory work was done on account of the emergency for delivery.

The diagnosis was contracted pelvis, dead fetus, and extreme exhaustion of the mother.

The treatment decided on was hysterectomy with the contents of the uterus in situ, to be followed by rapid incision of the uterus and delivery of the baby. This was carried out in the following manner. The tubes and round ligaments were ligated and clamped, broad ligaments clamped and divided, the peritoneum above the bladder incised and stripped down, that on a corresponding level posteriorly incised and stripped down. The right uterine artery was ligated and clamped; the cervix rapidly cut across, the left uterine artery being caught just before the cervical incision severed it. The uterus was then rapidly opened with large scissors and a macerated fetus delivered. The tubal and round ligament stumps were anchored to the sutured cervical stump and covered with peritoneal flaps.

Comment.—This method of treatment was chosen; first, because it is almost bloodless (the patient being in exhaustion); second, it could be performed with almost no soiling if care was observed; third, it could be done very quickly; fourth, it would prevent future pregnancies; fifth, I thought the baby, if alive, had an even chance.

Case No. 4.—Mrs. G. H., white, age 27, one child, which had been delivered by the ordinary Cæsarean section after a prolonged attempt at delivery. She had a moderately contracted pelvis and was given a chance to deliver. She was in a state of exhaustion, and for this reason her tubes were crushed and ligated in order to save time. She made a good recovery, and has a perfectly normal child. However, she became pregnant, and it again became necessary to do an abdominal delivery. With the consent of her and her husband it was decided to do a hysterectomy and remove the baby afterwards. The diagnosis being obvious, the operation was performed on Dec. 19, 1928, with the technique previously described, except that the cervical mucosa was sutured separately. There was no more trouble in resuscitating the baby than in the ordinary Cæsarean section. This method was chosen in this case for the purpose of preventing further pregnancies.

The outstanding features in the convalescence of these four cases has been very slight shock and distention as compared to the average case, and the general freedom from post-operative discomfort.

*See Journal F. M. A., Vol. XIV, No. 1 (July, 1927, p. 32.)

Before closing I wish to make a suggestion about the technique that will prevent all soiling of the peritoneum, and at the same time give the child an equal margin of safety. If two heavy clamps with bite sufficient to span the cervix with the uterine arteries are employed, one proximal and one distal to the line of incision, there will be no soiling, and it can be done so quickly that there will be no appreciable difference in the time during which the circulation would be cut off.

Just a word as to the indications for this type of operation. Unless further use of the method should show a greater maternal and infant mortality, or morbidity, I can see no reason why it should not be used in all cases where resection of the tubes are indicated. It conserves blood, it is easy of performance, it prevents soiling of the peritoneum, and does not require as much work. It is possible to conserve menstruation by leaving some of the lower segment of the uterus.

It would be contraindicated in conditions that would prevent easy delivery of the uterus on to the abdominal wall, or free access to the vessels, tubes, round ligaments, bladder, and lower segment of the uterus.

Notice!

TO MEMBERS:

Your state dues are payable January 1st, 1930.
Take $10.00 or a blank check to the next meeting of your county medical society.

TO SECRETARIES:

Revise and bring up-to-date, the roster mailed to you December 14th.
One delegate to be elected for each twenty paid members or major fraction thereof.

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THE MIAMI MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

Dade County Medical Society is to be congratulated on the most excellent way they planned and carried out the arrangements for the meeting of the Southern Medical Association held in Miami last month. The Magic City's lovely tropical setting, together with ideal weather so typical of Florida, made the occasion one long to be remembered by her guests. The entertainment features of the program were certainly more pretentious than any ever undertaken or carried out at previous meetings. The attendance was unusually good, there being a total registration of 1,960, while the number of physicians registered totaled 1,325. The Florida Medical Association showed its keen interest in the Southern Medical Association meeting by registering a total of 321 members.

MEMBERSHIP—1930

The county medical society rosters have been prepared and are now in the hands of the different secretaries. These rosters should be completed and corrected as soon as the 1930 dues have been collected. For several years past, the state association has made a most enviable record in the number of members who have kept up their annual dues with the state association. It is an index of interest in organized medicine as well as an indication of available strength due to enthusiasm and loyalty to an active organization.

Statistical equations are based on the laws of large numbers. In a well-organized association, there is strength in numbers. Individual influence is limited in our chosen profession but collectively a thousand good doctors will be respected for the ideals they represent if banded together. A strong, active state medical association is essential in Florida and all doctors licensed to practice medicine will be benefited. Every good doctor who is not a member retards the progress of his chosen profession more than he possibly realizes.

The secretaries of county medical societies have the 1930 rosters ready to record your annual dues to the state association. Please cooperate with the officers of your society by giving the secretary your check for annual dues. Very often, the secretary is a busy doctor and it would be a great act of cooperation to pay your dues without being solicited. The cooperation of the different members is very much appreciated by the officers of the state association. Scientific articles, editorials, news items, etc., have been coming in splendidly. The efforts to make your Journal up-to-date and worth-while have been untiring. Other states look on your Journal as an index of the strength and efficiency of organized medicine in Florida. It will be just as good as you make it. If every member puts his shoulder to the wheel January 1, 1930, and keeps pushing for the entire year, a new record will be set up. Yours for organized medicine in Florida.

THE MAN WHO "FLOCKS" BY HIMSELF

The physician who does not associate with his fellows runs great risk of falling into one of two errors. Either he becomes an egotist because he fails to see the good work that others are doing, or, if of a timid nature, and faithful in his work, from knowing his own weaknesses so well, he feels that he is immeasurably behind his brothers in the profession. One cannot see where he stands in the race unless he sees both those in front of him and those in the rear.

Let us, then, support warmly our medical societies. Let us inculcate into the minds of the younger men all that is best of the sacred inheritance which has come down to us from the earliest times, that they may know the debt they owe to the profession, and be led to attempt to add something to our store of knowledge, as an acknowledgment of the immensity of the debt. Let us instill into them ideals so high that they shall make of our occupation, not a mere trade, but what it should be, a liberal profession, and, I thank God, the noblest profession it is given to the sons of men to follow.—*Reprinted from A. M. A. Bulletin of March*, 1929.

THE MEDICAL MENTOR

The purpose of this Journal is "to serve as a means of communication between the several units of The Medical Press and to draw together in closer union the practitioners of this specialty."

It is claimed that about five hundred medical editors and assistant editors are employed in producing some two hundred medical Journals. Many times this number are engaged in the writing of books, which, jointly, constitute the membership of the American Medical Editors and Authors Association and it is for the pleasure and benefit of this group that this "Medical Mentor" has come into being. Editorials and original contributions are to be published in the "Mentor", dealing with the problems of medical journalism, essays of historical interest, a "Who's Who in the Association", and a review of current medical literature and new books. Since this is the official organ of the Association, all news of official nature will naturally be disseminated through this medium.

This Journal is to be devoted to the interest of editors and writers in medical publications and is a distinctive publication in magazine form, containing some ninety-four pages of reading matter and fourteen pages of advertising. The managing editor is Dr. H. Lyons Hunt of New York and the editor-in-chief is Dr. Thomas L. Stedman of the same city. The "Mentor" is published by the Medical Editors and Authors Press, Inc., Baltimore, Maryland, with the executive and editorial offices at 412 West End Avenue, New York City. Yearly subscription to this Journal is $3.00.

The first issue, which has been recently published, contains five communications on various problems and responsibilities of medical editors and writers, a debate section, a history of medical journals, a legal department, talks between doctor and layman, a library section, hobbies of medical men, a short story and a book review department.

This "new comer" is welcomed by the Journal of the Florida Medical Association and we sincerely trust that this splendid magazine in a new field will meet with unlimited success.

STATE NEWS ITEMS

Dr. H. Marshall Taylor was recently elected president of the Duval County Medical Society. Members of the organization were in annual session at the Chamber of Commerce building and in addition to Dr. Taylor, the officers named for the ensuing year were Dr. William McL. Shaw, vice-president; Dr. Kenneth Morris, secretary (re-elected for a fourth term); and Dr. E. C. Swift, treasurer. Dr. Edward Jelks, the retiring president, was elected to the board of governors succeeding Dr. Robert B. McIver, whose term of office expired. The holdover members of the board are Dr. John E. Boyd and Dr. S. E. Driskell. Eight delegates were named for the annual convention next May in Pensacola. A feature of the meeting was the presentation to the society of a gavel, the wood of which was taken from the house in Danville, Ky., where in 1809 Dr. Ephriam McDowell performed the first abdominal operation on record. Dr. Jelks prefaced the presentation with a short historical sketch concerning Dr. McDowell. The entertainment feature of the meeting was the serving of refreshments by the members of the Ladies' Auxiliary.

* * *

A report has just been received that C. W. Page of Chipley has been convicted of automobile theft and other counts, drawing two five-year sentences in the penitentiary. C. W. Page was associated with G. A. Munch and C. C. Faiman in the illegal sale of medical licenses some time ago.

* * *

Dr. R. F. Godard of Quincy is convalescing at home and at his office, part time. Dr. Godard was in the hospital for a complication of gall bladder and malarial infection.

* * *

A very interesting meeting of the Escambia County Medical Society was held Tuesday, December 10th, at the State Board of Health Building, Pensacola. Dr. Frederick J. Waas of Jacksonville presented a paper on "Diagnosis of the Acute Abdomen" and Dr. Shaler Richardson, Jacksonville, a paper on "Strabismus, with lantern slide demonstration of operative results." Following these interesting papers, a general discussion on plans for the next annual meeting in Pensacola was entered into heartily. The election of officers for the year 1930 resulted in the selection of Dr. Carl C. Webb, president; Dr. J. H. Fellows, vice-president; and Dr. J. M. Hoffman, secretary-treasurer. The new president advised that he would name the committees very soon to serve in connection with the annual meeting of the state association.

* * *

Dr. H. Mason Smith of Tampa and Dr. W. D. Nobles of Pensacola were in Jacksonville recently attending a meeting of the State Board of Health.

* * *

At the annual meeting of the Lake County Medical Society, the following officers were elected for 1930: President, Chas. H. Lodor, M.D., Eustis; vice-president, J. D. Couplan, M.D., Eustis; secretary-treasurer, W. L. Ashton, M.D., Umatilla; H. G. Holland, M.D., of Leesburg was elected delegate to the next state convention, with S. C. Colley, M.D., Tavares, as alternate.

* * *

A Florida roentgenologist was signally honored at the recent meeting of the Radiological Society of North America. Dr. Bundy Allen of Tampa was elected president of the Society at its Fifteenth Annual Convention in Toronto. The Radiological Society is the largest society of radiologists in North America.

* * *

Dr. L. M. Anderson of Lake City recently returned from a brief trip to Baltimore.

* * *

The National Tuberculosis Association executives made a survey in Florida and conferred with the executives of the state organization and of the Tuberculosis Association of Duval County. Dr. Kendall Emerson, managing editor of the National Tuberculosis Association, and Fred D. Hopkins, executive secretary of the organization, both of New York City, were among those from out of the state. The distinguished visitors were luncheon guests at the George Washington Hotel, Jacksonville, where an assembly of workers interested met and banqueted. Dr. Emerson was the speaker of the evening, presenting the cause he represents in a very vivid and forceful manner. Among those attending this meeting were the following: Dr. L. M. Bristol, Gainesville, president of the Florida Public Health Association; Dr. Henry Hanson, State Health Officer; Dr. Noble A. Upchurch, Jacksonville, City Health Officer; Drs. Kenneth Morris, Louie Limbaugh, T. Z. Cason, F. A. Brink and Stewart Thompson.

Dr. Ernest B. Milam has just been elected president of the Jacksonville Kiwanis Club to serve during the year 1930. Dr. Milam has been very active in Kiwanis for several years past and his selection as president was no surprise to his many friends.

* * *

Dr. Ferdinand Richards of Jacksonville was married to Miss Marguerite Ragsdale of Jackville on November 6th at the Holy Trinity Episcopal Church at Gainesville. Mrs. Richards attended school at Tallahassee and also at Brenau.

* * *

The many friends of Mr. Henry Parramore, president of the Surgical Supply Company of Jacksonville, Tampa and Miami, will be interested to learn of his marriage to Mrs. Alice Cothran at the Central Presbyterian Church in New York City on November 26th.

* * *

Dr. W. M. Bevis, formerly of Lakeland, has recently been appointed chief of reception service at the U. S. Veterans' Hospital, Northport, L. I., N. Y. Dr. Bevis has been engaged in psychiatric and neurological work in private, state and federal hospitals for some time.

* * *

On glancing over the registration of doctors who attended the recent meeting of the Southern Medical Association, held in Miami, which appears in this Journal, it will be noted that about one-half of the membership of the Orange County Medical Society were on hand. This is a splendid record for this very fine society.

* * *

Another annual subscription to the Florida Medical Journal has just been received from past-president, Dr. Fred J. Walter of San Diego, California. Dr. Walter's new address is: 4381 Hart Drive. Although separated by the entire breadth of the United States, Dr. Walter's interest in organized medicine in Florida is still very keen as indicated by his careful reading of the State Journal each month and his frequent correspondence with the officers of the Association.

* * *

The many friends of Dr. C. W. Shackelford of Palm Beach will regret to learn that he recently had the misfortune to fracture an os calcis which necessitated the use of crutches for some two weeks. He is now making satisfactory progress. Mrs. Shackelford is convalescing from a three weeks' illness.

Whereas, Dr. Harry C. Welch, a much-esteemed and highly honored charter member of the Pinellas County Medical Society, died at his home, 934 Beach Drive, St. Petersburg, Fla., on Aug. 7, 1929, after a prolonged illness, and

Whereas, Dr. Welch, after graduating at Medical Department University of Louisville in 1891, first practiced medicine in Florida at Palatka and at the death of his brother, Dr. Thomas Welch of St. Petersburg in 1907, he having spent two years in Europe studying in eye, ear, nose and throat, removed to St. Petersburg in 1907 where he remained in active practice until his death, and

Whereas, Dr. Welch was president of the Pinellas County Medical Society in 1916-17 and always an ardent supporter of organized medicine, and his genial personality won for him a host of friends and his death is a distinct loss to the Medical Society and the community, therefore be it

Resolved, That the Pinellas County Medical Society desires to place on record its high appreciation of Dr. Welch and its profound regret at his loss, and

Resolved, That a copy of these resolutions be sent to his widow, to the Medical press, for publication and that they be spread on the minutes of this Society.

W. M. Davis, M.D.,
R. H. Knowlton, M.D.,
A. J. Wood, M.D.,
Committee.

Dr. H. E. White of St. Augustine recently returned from Boston, where he took post-graduate work at Harvard Medical School.

* * *

Dr. R. B. Harkness of Lake City recently attended the meeting of the American College of Surgeons held in Chicago and later the session of the Interstate Post-Graduate Assembly in Detroit.

* * *

Dr. Blair Sutton of Baltimore was a guest of the Escambia County Medical Society on November 12th. He gave a most illuminating talk on "The Effect of Tuberculin on Malignancy."

Dr. George R. Maner of Tampa was recently elected president of the Seminole Civic Club of that city.

* * *

Dr. John S. Helms of Tampa recently returned from Chicago where he attended the meeting of the American College of Surgeons. Dr. Helms was reelected upon the Board of Governors of the College.

* * *

The members of the Sarasota County Medical Society and the Manatee County Medical Society recently held their joint monthly meeting. Dinner was served, after which followed a scientific program. Dr. Frank C. Metzger of Sarasota presented a paper on "Pulmonary Tuberculosis." A general discussion followed. Guests of the evening were Drs. Hall and Boorom of New York. Dr. Joseph Halton, president of the Sarasota County Medical Society, presided.

* * *

Friends of Drs. T. S. Anderson of Live Oak and L. M. Anderson of Lake City will regret to learn of the death of their mother, who passed away recently at her old home in White Springs, at the age of ninety-three years.

* * *

Dr. Harry McEuen of Jacksonville recently attended the meeting of the Radiological Society of North America, held at Toronto, Canada. Dr. McEuen presented a paper entitled "Malignant Melanoma—Report of Six Cases Treated by X-ray Radiation with Two Cured for Over Five Years."

* * *

The Volusia County Medical Society recently met at DeLeon Springs. The principal address of the evening was given by Dr. C. W. Claxton of Melbourne. The ladies auxiliary met the same evening and had a well-represented meeting.

* * *

Dr. and Mrs. M. A. Lischkoff recently returned to Pensacola from a vacation in the east.

* * *

Dr. C. S. Hassell of Miami announces the reopening of his offices in the Huntington Building. Practice will be limited to urology.

* * *

The many friends of Dr. G. W. Richardson of Jacksonville will be interested to learn of his marriage to Miss Etta Morris of Orangeburg, S. C., which took place on December 4th at the Christ Church, Orangeburg.

Dr. C. W. Shackelford announces the removal of his offices to Suite 4, Palm Way Building, Royal Palm Way at County Road, Palm Beach.

* * *

The October meeting of the Pasco-Hernando-Citrus County Medical Society was held in Brooksville. Dinner was served at the Tamiami Cafe, after which a scientific program was presented at Dr. Creekmore's office. As usual with this Society, the meeting was well attended.

* * *

Dr. C. Larimore Perry of Miami announces the opening of offices in the Huntington Building. His practice will be limited to general surgery and surgical diagnosis.

* * *

Dr. J. Warren White, Chief Surgeon of the Shriners' Hospital for Crippled Children, Greenville, S. C., on his recent visit to Florida to attend the Southern Medical Meeting in Miami, held examination clinics in Miami, Tampa and Jacksonville. About one hundred crippled children were examined at these three clinics. Some of these will be treated at Greenville while others will be treated by local surgeons. He was assisted by Dr. Donald T. Babcock in Miami, Dr. L. F. Carlton in Tampa and Dr. F. L. Fort in Jacksonville.

* * *

At a recent meeting of the Pinellas County Medical Society the following program was presented: "Spinal Anesthesia," Dr. John R. Boling, Tampa; "Penalties of High Tension Living," Dr. Wm. Morgan, Tarpon Springs; "Medical Science in Greece," Dr. Theo. Tsangaris, Tarpon Springs. Refreshments were served following the meeting.

* * *

The Hillsboro County Medical Society is cooperating with the Hillsboro County School Board in working out and maintaining a uniform health nursing program for the school children of Hillsboro County. Their assistance has been necessary because of failure of the county agencies to provide an appropriation for such work.

* * *

Members of the Florida Medical Association who were registered at the twenty-third meeting of the Southern Medical Association held in Miami, in November, were as follows:

Adkins, E. H. Miami
Agos, I. H. Miami
Alford, N. Jacksonville
Allen, O. F. Miami
Alsobrook, J. W. Plant City

Ames, A. M. Pensacola
Anderson, W. E. Pensacola
Andrews, C. A. Tampa
Andrews, L. L. Orlando
Arnold, W. O. West Palm Beach
Aronovitz, S. Miami
Babcock, D. T. Miami
Babcock, H. C. Miami
Baker, J. M. Miami
Baker, L. A. Miami
Baldwin, R. H. West Palm Beach
Baltzell, N. A. Marianna
Barge, H. A. Miami
Barge, W. J. Miami
Bartlett, C. W., Jr. Tampa
Benton, G. H. Coral Gables
Bertram, A. J. Miami
Bevis, H. P. Arcadia
Bieker, A. M. St. Petersburg
Bieker, S. B. St. Petersburg
Binkley, J. F. West Palm Beach
Blackman, H. J. Tampa
Blackmar, R. W. Jacksonville
Blair, W. M. West Palm Beach
Blake, L. W. Bradenton
Blake, W. C. Tampa
Boughton, H. Miami Beach
Brink, F. A. Jacksonville
Brinson, W. D. Baldwin
Brown, H. O. Clearwater
Brown, O. C. Ft. Lauderdale
Bryans, H. L. Pensacola
Bullard, C. P. Miami
Burch, R. N. Miami
Burnett, W. E. St. Augustine
Butler, B. F. Hollywood
Carefoot, G. H. Ft. Meade
Carlisle, J. L. West Palm Beach
Carter, A. C. Miami
Cason, T. Z. Jacksonville
Chalker, J. L. Ocala
Chambers, S. E. Miami
Chandler, G. E. Miami
Chandler, J. R. Daytona Beach
Chiles, J. H. Orlando
Chilli, J. L. Jacksonville
Christ, C. D. Orlando
Clark, H. D. Ft. Pierce
Claxton, W. A. Melbourne
Cleghorn, C. D. Miami
Coleman, W. E. Chipley
Collins, C. J. Orlando
Conger, G. D. Miami
Coplan. M. M. Miami
Copp, F. A. Jacksonville
Couric, E. S. Miami
Creekmore, G. R. Brooksville
Cunningham, L. W. Jacksonville
Darrow, A. A. Ft. Lauderdale
Davis, H. F. Miami
Davis, J. C., Jr. Quincy
Day, H. A. Orlando
DeBoe, M. P. Miami
Dickinson, J. C. Tampa
Dodge, P. L. Miami
Dozier. H. C. Ocala
Driskell, S. E. Jacksonville
Duke, R. R. Tampa
Dunaway. C. E. Miami
DuPuis. J. G. Miami
Elder, S. F. Miami
Elgin, L. W. Miami
Ellis, W. H. Miami
Estes, J. L. Tampa
Farmer. C. H. Lakeland
Field. T. S. Jacksonville
Fleming. S. W. West Palm Beach
Flipse, M. J. Miami
Folsom, S. A. Orlando
Forbes, S. B. Tampa
Fort, F. L. Jacksonville
Fox, H. H. Miami
Foxworthy, F. W. Miami
Freeman, A. H. Ocala
Freeman, M. Perrine
French, E. D. Miami
Gachet, N. L. Century
Gates, H. Bradenton
Gerlach, E. B. West Palm Beach
Ghertler, M. Miami
Gilmer, E. S. Tampa
Goodson, W. M. Miami
Gowdy, F. A. Miami
Gowdy, R. A. Miami
Grace, W. H. Ft. Myers
Graves, J. R. Miami
Grimes, D. H. South Miami
Haggard, W. A. Miami
Hall, E. J. Miami
Hall, J. E. Miami
Hall, T. B. Miami Beach
Hardie, G. C. Ft. Pierce
Harris, D. W. Miami
Harris, H. H. Jacksonville
Harris, J. E. Sarasota
Harris, R. M. Miami
Harrison, W. A. Ft. Myers
Hartley, J. M. Hollywood
Hatch, E. B. Miami
Hay, I. M. Melbourne
Heck, M. E. Miami
Hendricks, E. M. Ft. Lauderdale
Henry, H. W. New Smyrna
Herpel, F. K. West Palm Beach
Highsmith, G. F. Arcadia
Hodsdon, B. F. Miami
Hodsdon, L. A. Miami
Hoffman, C. D. Orlando
Hoffman, J. M. Pensacola
Holden, G. R. Jacksonville
Holloway, L. W. Jacksonville
Holmes, R. J. Miami
Hotchkiss, W. T. Miami Beach
Hutson, T. W. Miami
Ingersoll, J. M. Miami
Ingram, L. C. Orlando
Irwin, J. M. St. Augustine
Jeffrey, S. L. Miami
Jelks, E. Jacksonville
Jenkins, L. M. Miami
Johnston, H. Orlando
Johnston, W. J. Sarasota
Jones, H. Q. Ft. Myers
Jones, W. C., Jr. Miami
Kayton, M. C. Wauchula
Keeler, F. L. Miami
Kemp, A. J. Miami
Kendrick, O. G. Tallahassee
Kennon, C. L. Miami
Kirby-Smith, J. L. Jacksonville
Kirk, W. W. Jacksonville
Kirkpatrick, C. H. Arcadia
Kirsch, M. D. Miami
Kitchens, F. E. Coral Gables
Knight, J. C. Plant City
Knowlton, R. H. St. Petersburg
Lambdin, L. St. Petersburg
Langley, W. T. Sanford
Lanier, W. T. Miami
Leavitt, H. A. Miami
Lefholz. R. Miami
Lewis, T. Miami
Light, S. D. W. Miami
Limbaugh, L. M. Jacksonville
Lingeman. R. B. Ft. Lauderdale
Lithgow, W. D. Miami
Litterer, A. B. Miami
Lochner, G. M. St. Petersburg
Lott, Y. C. Miami

Love, J. D. Jacksonville
Lowry, B. W. Tampa
Lowry, J. B. Nichols
Lowry, R. S. Ft. Lauderdale
Lucinian, J. H. Miami
Luke, J. M. J. Miami
Lustgarten, A. Miami
Lyell, R. O. Miami
McBride, T. E. Apopka
McClellan, G. S. Pompano
MacDonell, G. N. Miami
McEachern, J. R. Tampa
McEwan, J. S. Orlando
McGinnis, R. H. Jacksonville
McGunagle, J. E. Miami
McKenzie, E. N. Miami
McKenzie, J. S. Miami
McKenzie, O. G. Miami
McKibben, W. W. Miami
McLaury, E. Hollywood
Maguire, T. C. Plant City
Manhoff, B. Jacksonville
Manning, W. S. Jacksonville
Manson, P. J. Miami
Marsh, L. J. Miami
Marshall, C. J. Sanford
Martin, D. D. Tampa
Martin, M. C. Miami
Mason, J. F. Bradenton
Maxwell, E. B. Miami
Maxwell, L. H. Ft. Lauderdale
Medlin, W. B. Miami
Miller, R. L. Daytona Beach
Mills, A. L. St. Petersburg
Milton, J. D. Miami
Moor, F. C. Tallahassee
Moore, J. N. Ocala
Morton, A. O. Sarasota
Moss, W. H. Miami
Netto, L. J. West Palm Beach
Newell, C. E. Miami
Newnham, J. A. Stuart
Nichol, E. S. Miami
O'Quinn, L. H. Hialeah
Orr, L. M., Jr. Orlando
Osincup, G. S. Orlando
Overstreet, G. C. Lakeland
Palmer, B. H. Miami
Palmer, H. E. Tallahassee
Panettiere, C. Miami Beach
Papot, G. E. West Palm Beach
Parker, J. D. Stuart
Patterson, W. Tampa
Paulk, G. A. Miami
Payne, J. W. Miami
Payton, F. J. Miami Beach
Pearson, H. L. Miami
Pearson, J. R. Miami
Pearson, N. T. Miami
Pearson, R. J. Miami
Peavy, H. J. Ft. Lauderdale
Peek, E. G. Ocala
Peery, E. W. West Palm Beach
Perry, C. L. Miami
Peters, E. Miami
Phillips, K. Miami
Powell, J. A. West Palm Beach
Quillian, W. Coral Gables
Raap, G. Miami
Raborn, J. D. Trenton
Repass, R. E. Miami Beach
Rice, S. D. Gainesville
Rivers, T. M. Kissimmee
Robinson, L. F. Ft. Lauderdale
Rollins, C. D. Jacksonville
Rosborough, D. Y. Palatka
Ross, W. E. Jacksonville
Rowlett, W. M. Tampa
Rozier, L. M. West Palm Beach
Rudisill, C. A. Tampa
Ryan, W. B., Jr. Miami
Sayles, C. F. Miami
Schubert, F. P. Miami Beach
Shackelford, W. L. West Palm Beach
Shaw, E. C. Miami
Shisler, J. W. Miami
Simmons, J. A. Arcadia
Simpson, J. K. Jacksonville
Simpson, J. R. Ft. Lauderdale
Simpson, W. T. Winter Haven
Sinclair, J. A. B. Miami
Sinclair, W. E. Orlando
Skaggs, P. T. Miami
Smith, B. Tampa
Smith, C. K. Miami
Smith, D. T. Gainesville
Smith, H. M. Tampa
Smith, J. W. Miami
Smith, M. Miami
Sory, B. B., Jr. Lake Worth
Spiers, W. H. Orlando
Stevens, R. E. Sanford
Stone, V. D. West Palm Beach
Stovall, R. H. Ft. Lauderdale
Stuart, J. D. Miami
Snyder, J. W. Miami
Tallman, M. H. Miami
Taylor, H. M. Jacksonville
Taylor, T. W. Sarasota
Teeter, E. H. Jacksonville
Thomas, E. C. Miami
Thomas, K. C. Miami
Thomas, W. C. Gainesville
Thompson, H. O. Tampa
Thorne, J. I. Miami
Threlkeld, M. E. Miami
Tillman, G. C. Gainesville
Timberlake, G. St. Petersburg
Toy, S. H. Umatilla
Tumlin, C. E. Miami
Turberville, J. S. Century
Turner, J. C. Miami
Upchurch, N. A. Jacksonville
Van Schaick, H. D. Jacksonville
Vassar, T. D. Lakeland
Veal, E. W. South Jacksonville
Vinson, W. J. Miami
Vogt, F. A. Miami
Waas, F. J. Jacksonville
Walker, H. A. Hollywood
Walters, A. L. Miami Beach
Walton, M. Hastings
Watson, H. Lakeland
Watters, W. H. Coconut Grove
Webb, C. C. Pensacola
Webb, E. P. Crestview
Webb, R. West Palm Beach
Weed, W. A. Lakeland
Weiland, A. H. Coral Gables
Welch, P. B. Coral Gables
Westermann, J. T. Miami
Whiddon, L. L. Ft. Pierce
White, D. W. Miami Beach
Whitten, B. L. Miami
Wilcox, C. R. Jacksonville
Williams, J. F. Monticello
Wilson, C. B. Sarasota
Wilson, J. F. Jacksonville
Wilson, J. F., Jr. Lakeland
Wilson, M. West Palm Beach
Wilson, M. C. Miami
Withers, G. H. Miami Beach
Wood, A. J. St. Petersburg
Wood, A. W. Miami
Woodard, R. C. Miami
Youmans, C. P. Miami
Youmans, I. C. Miami

Also:
Thompson, Stewart, Business Manager Jacksonville

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	92%
Bay	J. M. Whitfield, M.D., Panama City.					64%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		71%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	83%
Columbia	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	76%
DeSoto-Hardee-Highlands	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	100%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	86%
Escambia	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	74%
Hamilton	R. A. Barnett, M.D., White Springs.					100%
Hillsboro	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	85%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	63%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	93%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	82%
Leon-Gadsden-Liberty-Wakulla-Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	71%
Madison	Geo. O. Davis, M.D., Madison.					100%
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	95%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	100%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	85%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	90%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	96%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	72%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	75%
St. Johns	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	64%
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	85%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		85%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	60%
Suwannee	W. C. White, M.D., Live Oak.					86%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	92%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-Holmes	W. C. Harper, M.D., Chipley.					100%

NOTE—Secretaries: Please submit information to complete the above schedule.

TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION



SINCE Koch's discovery of tuberculin some 40 years ago, the search for a satisfactory specific against the tubercle bacillus has been ceaseless. Failure to find it is not surprising. Protection against tubercle bacilli depends ultimately on the power of the body to encapsulate them. This power, or "sensitization," is acquired only as the result of harboring the bacilli in the tissues. How to "draw the teeth" of the tubercle bacilli so that it will stimulate the beneficient physiological reactions resulting in tubercle formation and yet not destroy tissue has long challenged the research worker. Calmette has produced BCG, which is essentially a vaccine consisting of an attenuated strain of living bovine tubercle bacilli, which he claims are harmless and capable of engendering defense reactions of the cells. In America, opinion as to Calmette's claims has not yet crystallized and considerable skepticism is voiced.

BACILLUS CALMETTE-GUERIN

Professor A. Calmette of Pasteur Institute isolated a certain strain of bovine tubercle bacilli in 1908 and, during a period of 13 years, attenuated them by 230 passages on a medium of potato glycerin and bile. After experimenting with cattle, he applied the vaccine to babies, and he and other workers have by this time vaccinated more than 200,000 infants. Within ten days after birth, he gives by mouth a recently prepared microbic emulsion (which contains *living* bacilli) in three doses at intervals of 48 hours. This is easily absorbed by the intestinal mucosa. The bacilli are carried by protoplasmic cells which have phagocytic powers into the lymphatic system, the lymph glands, the spleen and the bone marrow. The vaccines are not digested but behave as harmless parasites and in a short time elaborate the defensive substances.

Calmette has gathered an imposing array of statistics from health departments, clinics, and physicians. His interpretations of these figures indicate that vaccinated infants of tuberculous parents are greatly more resistant to tuberculosis than the unvaccinated, particularly if vaccination

(*Continued on page* 280)

DRUG ADDICTS

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is carried out during the first ten days of life. Furthermore, he interprets his statistics to mean that the general infant mortality is decidedly less among vaccinated than among unvaccinated children. For example, in one group of 3,808 vaccinated children in tuberculous surroundings, 3.1 per cent died (from all causes) during the first year of life. The corresponding death rate for France of non-vaccinated children was 8.5 per cent, or more than twice as high. It is confidently claimed that the injection of BCG causes no unfavorable reactions, though rarely a slight rise in temperature is observed.

What is the duration of immunity acquired by this method? Calmette states it is longer than was at first supposed and believes that the immunity is maintained and reinforced by the subsequent infections which a child encounters in a tuberculous environment. Apes vaccinated in 1923 were still refractory to the infection through cohabitation with artificially infected apes in 1927.—*The Preventive Vaccination of New-Born Infants against Tuberculosis by Means of the BCG, A. Calmette, Bull. de l'Union Internationale contre la Tuber., Vol. V, No. 1, Jan., 1928.*

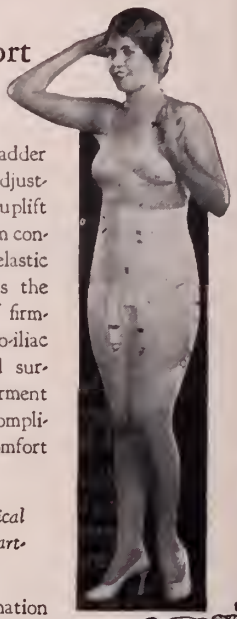
CRITICISMS OF BCG

Petroff, of the Trudeau Sanatorium, challenges Calmette's conclusions. He points out, among other things, that Calmette made no clinical and X-ray studies of the vaccinated infants and that the mortality rate is not a suitable criterion to determine the protective value of the vaccine. He states that Calmette selected his cases to some extent and that bad risks were not vaccinated. He quotes Greenwood and Rosenfeld as having analyzed Calmette's statistics and found them faulty on several counts.

More specifically, Petroff questions the claim that BCG is without danger. He has, during the past four years, studied the biological characteristics of four separate cultures of BCG. "Every one of the cultures occasionally produced progressive tuberculosis in guinea pigs and the lesions could be transferred to healthy animals." By cultivating BCG on fluid media, he succeeded in dissociating two distinct types of colonies; one waxy, with small wrinkles, with clear-cut, rounded and raised outlines, the other less common, slightly smaller, with irregular wrinkles. He designated these cultures as "R" and "S" respectively. The "R" colony produced tubercles

(*Continued on page* 282)

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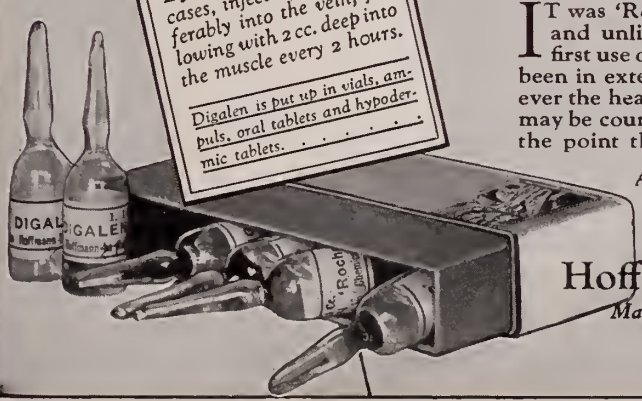
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when injected into guinea pigs but these tended to heal. The "S" colony produced progressive tuberculosis. Petroff claims that BCG is not "fixed" and that a virulent strain can be dissociated from it in the laboratory. Recalling that mutability is one of the characteristics of bacteria, he warns that BCG, harmless when injected, may in time regain virulence.

In conclusion, he says: "We have now reached the cross-road and must decide as to what course we must pursue in our campaign against tuberculosis. Shall we tuberculize the whole world by adopting Calmette's method of vaccination with living microörganisms . . . or shall we continue those preventive methods adopted some years ago in this country and Canada, and so successfully employed in reducing the mortality from tuberculosis and preventing infection in infants."—*A New Analysis of the Value and Safety of Protective Immunization with BCG, S. A. Petroff, Amer. Rev. of Tuber., Vol. XX, No. 3, Sept., 1929.*



Figure 1—"R" colony of BCG, not virulent for guinea pigs. (Courtesy S. A. Petroff.)

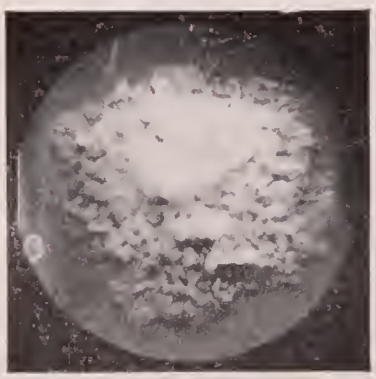


Figure 2—"S" colony of BCG isolated by Petroff, which proved virulent for guinea pigs. (Courtesy S. A. Petroff.)

(*Continued on page* 284)



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BCG IN NEW YORK CITY

Kereszturi reported experiences with the use of BCG on 183 babies in New York City. She concludes that infants of tuberculous mothers promptly vaccinated by mouth do not acquire tuberculosis as readily as the unvaccinated. She admits that the total number is small and not sufficient on which to base substantial conclusions but is of the opinion that BCG vaccination is relatively simple and harmless, that it gives some immunity, and that the degree and duration of immunity cannot be determined as yet.—*Oral Vaccination with BCG on Human Beings in New York City, Camille Kereszturi, Amer. Rev. of Tuber., Vol. XX, No. 3, Sept., 1929.*

A CLINICIAN'S VIEWPOINT

Baldwin concedes that BCG is not without its danger but questions if that danger is greater than the risk a child runs in acquiring tuberculous infection in the natural manner. He inclines to the view that, while BCG has some virtue, it is at present an unnecessary instrument in the general battle against tuberculosis in this country. Assuming that tuberculous infection is gradually declining among children in this country, perhaps in the same ratio as is the death rate, he points out that there may soon be a generation of people who have acquired no immunity against tuberculosis, at which time some such artificial protection as is afforded by BCG may prove to be a very good substitute for the naturally acquired immunity on which we depend today. He favors more investigation before universal application of BCG is made in the United States.

To the frequently asked question as to whether it is the vaccination or the separation of the child from its mother that protects the infant, Calmette's answer is that the separation is but a brief one and not sufficient of itself to protect the child. But, said Dr. Baldwin, the mere fact that such separation is effected implies that the mother has been apprised of the danger of exposing the infant to her tuberculosis and has been given a detailed explanation as to why the separation is necessary. Consequently, when the child is returned to its mother after a period of a few weeks, the mother will doubtless continue to exercise those precautions which have been impressed upon her; whereas, mothers whose babies have not been separated from them are not so likely to be aware of the danger of close contact. —*Discussion, New England Conference on Tuberculosis, Hartford, Conn., April 26, 1929.*

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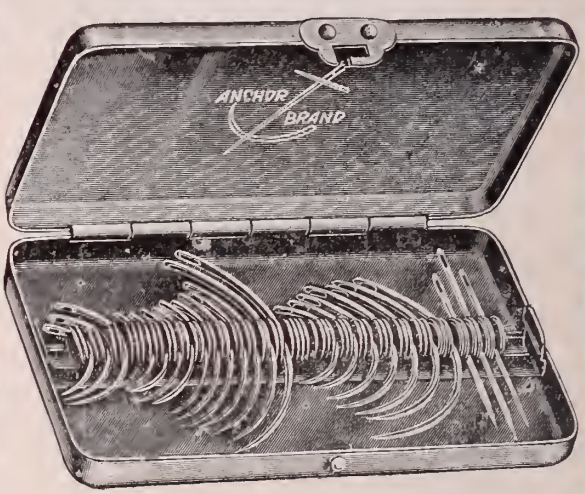
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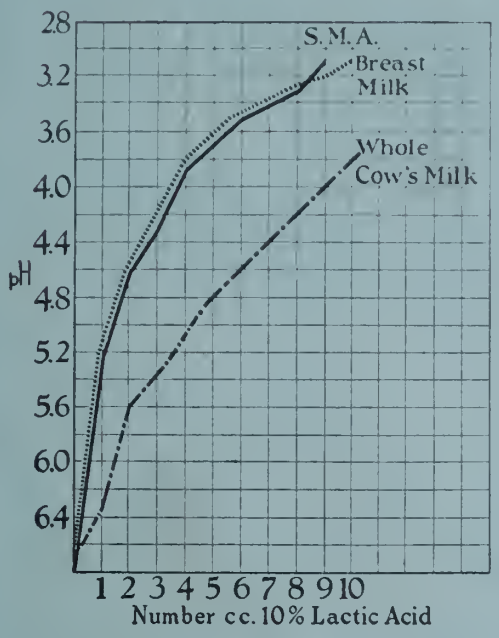
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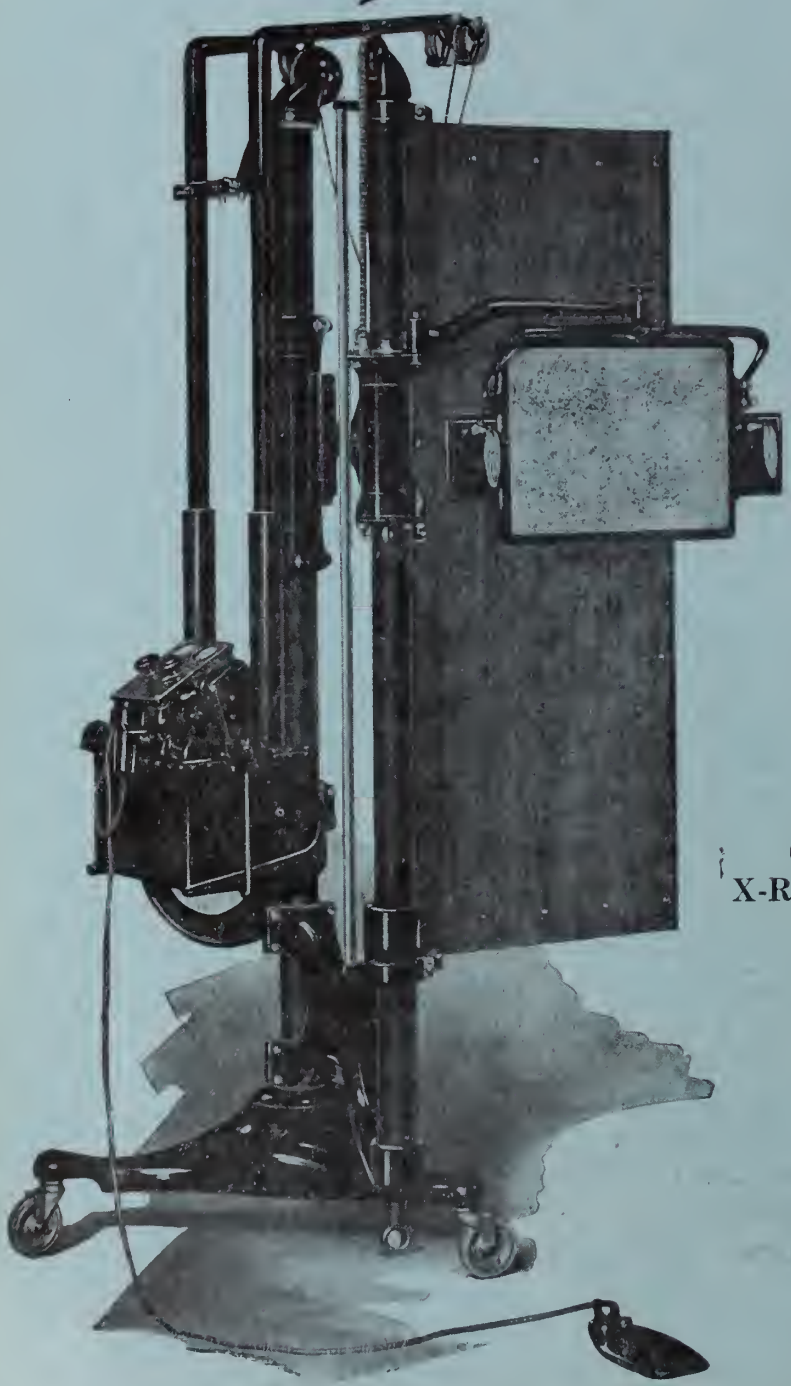
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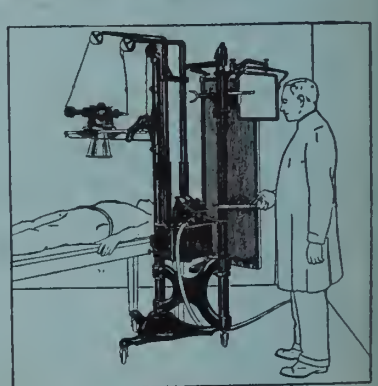
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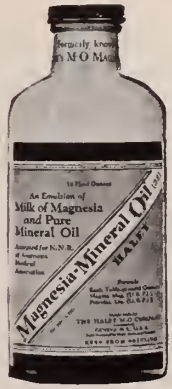
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[1] *J. Biol. Chem., 76:2.* [2] *Ibid., 66:451.*
[3] *Ibid., 80:15.* [4] *Ibid., 76:251.*



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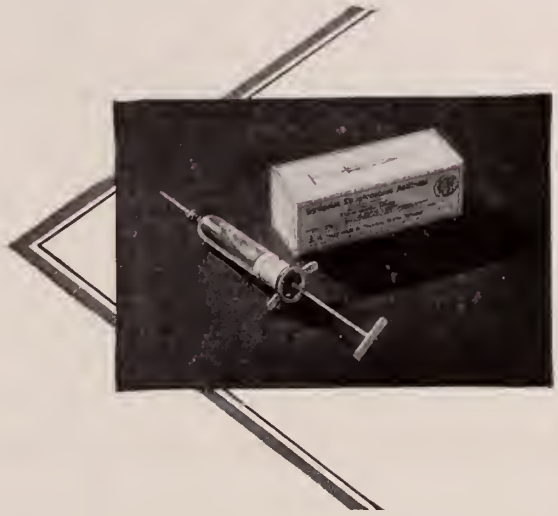
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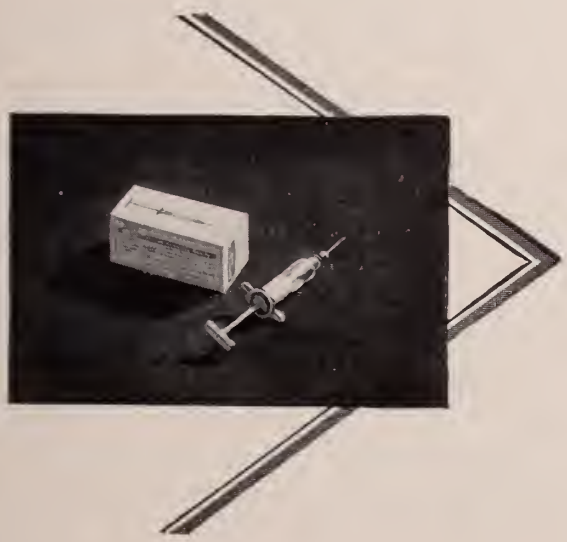
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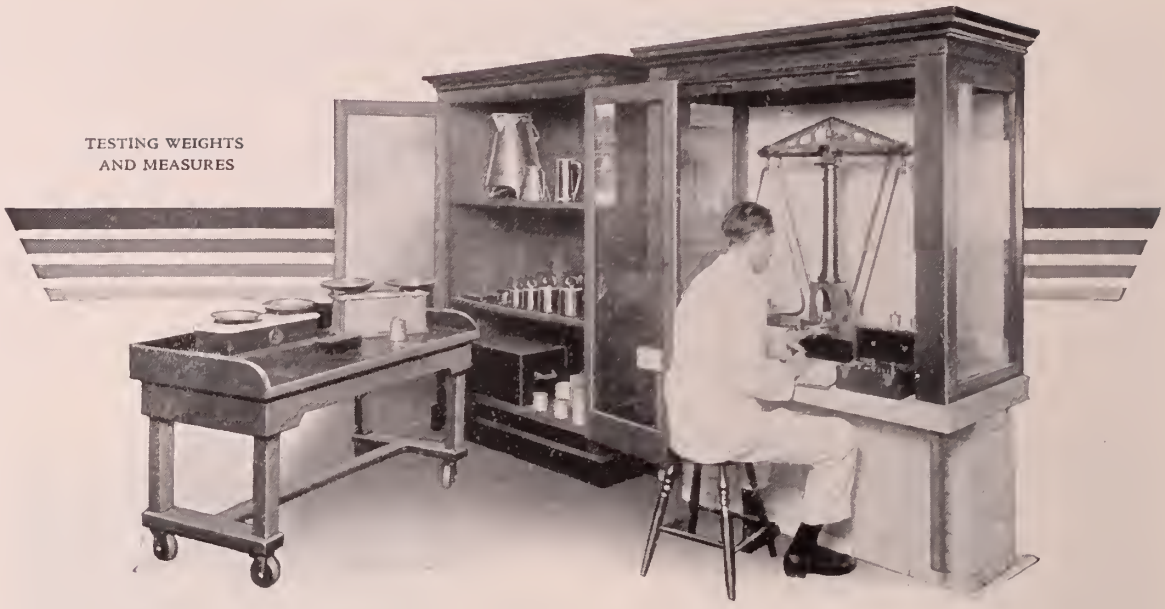
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Copied from "Ephraim McDowell" by Schachner.

EPHRAIM McDOWELL*

EDWARD JELKS, M.D.,

Jacksonville.

Thirty-three years before Crawford W. Long first used ether for inhalation anesthesia, and more than half a century prior to the work of Lister on antiseptic surgery, the first ovarian tumor was removed. The surgeon was Ephraim McDowell; the patient was Jane Todd Crawford.

The operation was performed Sunday, December 13, 1809. This memorable morning the little Kentucky town, Danville, of three hundred inhabitants, was astir with interest in what was going to happen that day; for it had been noised abroad that an important experiment was to be undertaken by Dr. McDowell. Tradition even has it that about his home had gathered a large crowd whose expressed sentiment was that the doctor would be punished should harm come to her upon whom the operation was to be performed. There was no lack of confidence in Dr. McDowell, for he had practiced in Danville fourteen years, and had performed many of the usual and accepted operations of his day, such as lithotomy, amputation, etc.; but to attempt the removal of a large abdominal tumor seemed to be overstepping the boundaries which should mark the limits of surgery. Hardly fifteen years previously, Dr. McDowell had been taught in Edinborough, Scotland, by the Scotch surgeon, John Bell, that the removal of a large ovarian cyst was impossible, and its attempt meant death for the patient. The only hope for a woman with a pelvic tumor was that its growth would not overtake her. She must endure the discomfort, the digestive disturbances, and constipation which such a growth caused, and hope not to succumb to "locked bowels," circulatory breakdown, or other complications. Such was the tragic prospect before December 13, 1809, but on that day hope was born not only to those with pelvic tumors, but also to the thousands who would

*Biographical sketch read before the Duval County Medical Society, December 3, 1929, when Dr. Edward Jelks, the retiring president, presented to the Society a gavel made of wood taken from the house in which Dr. McDowell's epochal operation was performed.



House in which Dr. McDowell performed the first ovariotomy.

suffer or die from abdominal pathology, which now can be corrected by surgical therapy. Little did he, who announced to the eager crowd the successful completion of the operation by Dr. McDowell, realize that he was announcing the birth of abdominal surgery.

Let us read Dr. McDowell's modest report of this famous operation:

"In December, 1809, I was called to see a Mrs. Crawford, who had for several months thought herself pregnant. * * * Upon examination, per vaginam, I found nothing in the uterus, which induced the conclusion that it must be an enlarged ovarium. Having never seen so large a substance extracted nor heard of an attempt or success attending any operation such as this required, I gave to the unhappy woman information of her dangerous situation. She appeared willing to undergo an experiment, which I promised to perform if she would come to Danville (the town where I live), a distance of sixty miles from her place of residence. This appeared almost impracticable by any, even the most favorable conveyance, though she performed the journey in a few days on horseback. With the assistance of my nephew and colleague, James McDowell, M.D., I commenced the operation, which was concluded as follows: Having placed her on a table of the ordinary height, on her back, and removed all her dressing which might in any way impede the operation, I made an incision about three inches from the musculus rectus abdominis, on the left side, continuing the same nine inches in length, parallel with the fibres of the above named muscle, extending into the cavity of the abdomen, the parietes of which were a good deal contused, which we ascribed to the resting of the tumor on the horn of the saddle during her journey. The tumor then appeared full in view, but was so large that we could not take it away entire. We put a strong ligature around the Fallopian tube near the uterus, and then cut open the tumor, which was the ovarian and fimbrious part of the Fallopian tube very much enlarged. We took out fifteen pounds of a dirty, gelatinous-looking substance, after which we cut through the Fallopian tube and extracted the sack, which weighed seven pounds and one-half. As soon as the external opening was made the intestines rushed out upon the table, and so completely was the abdomen filled by the tumor that they could not be replaced during the operation, which was terminated in about twenty-five minutes. We then turned her upon her left side, so as to permit the blood to



Copied from "Ephraim McDowell" by Schachner.

escape, after which we closed the external opening with the interrupted suture, leaving out, at the lower end of the incision, the ligature which surrounded the Fallopion tube * * * In five days I visited her, and much to my astonishment found her engaged in making up her bed. I gave her particular caution for the future, and in twenty-five days she returned home as she came, in good health, which she continues to enjoy."

Dr. Ephraim McDowell was born in Rockbridge County, Virginia, November 11, 1771. When he was twelve years old his father moved to Kentucky where Ephraim spent his boyhood days and received an education at Transylvania Seminary in Danville. After serving two years' apprenticeship to Dr. Alexander Humphreys of Staunton, Virginia, he spent two years in Edinborough where he came under the tutorage of the renowned Bell brothers. Upon returning home he opened his office in Danville. By December 13, 1809, he had gained a wide reputation as physician, but a greater one as surgeon. At the time of his death, June 20, 1830, he had performed abdominal sections for removal of tumors eight times with only one death. He had also performed many operations for conditions that in his day were usually treated by surgery. The nobleness of his ideals, and the high respect he held for his calling are shown in his wish concerning the type of surgeon who will perform his operations. He wrote:

"It is my most ardent wish that this operation may remain, to the mechanical surgeon, forever incomprehensible. Such, have been the bane of the science; intruding themselves into the ranks of the profession, with no other qualification but boldness in undertaking, ignorance of their responsibility, and indifference to the lives of their patients; proceeding according to the special dictates of some author as mechanical as themselves, they cut and tear with fearless indifference, utterly incapable of exercising any judgment of their own in cases of emergency; and sometimes, without possessing even the slightest knowledge of the anatomy of the parts concerned."

The house in which the first ovariotomy was performed stands today in Danville, Kentucky. It passed out of the family years ago, and for a long while was occupied by negroes. The building is made up of two divisions; the main part a two-story wood structure and two brick shed wings. Perhaps the house was built at different times. We know that for a while Dr. McDowell's office was located in the front room on the right, and later in the wing opening into this. Some ten years ago when the house was going through its period of greatest dilapidation, when there was a leaky roof, many vacant window panes, and the weather was wearing away the structure, a Danville inhabitant secured a piece of crumbling window sill. About two years ago she gave this scrap of wood to me. From it I have made a gavel. It gives me great pleasure to present it to this Society.

Mr. President, my sincere hope is that you and others who will hold your position of honor, may, with this gavel, open more and more successful meetings of the Duval County Medical Society.

ACUTE PURULENT OTITIS MEDIA IN CHILDREN*

N. Worth Gable, M.D.,
St. Petersburg.

The preservation of the special senses, especially those of seeing and hearing, is secondary in importance only to the saving of the life of the individual. Infections of the eye, easily seen and

*Read before the Pinellas County Medical Society, St. Petersburg, November 1, 1929.

often alarming both to the physician and to the parents, usually receive the attention their importance warrants. Infections of the ear, often insidious in onset and free from systemic manifestations, frequently fail to receive the consideration their seriousness deserves. This is amply borne out by the large number of adults encountered who are deaf or nearly so as a result of ear infections dating from childhood. It is only at a later stage of life, when the impaired hearing is an economic or social handicap and the damage to hearing is irretrievable, that a persistent effort is made to cure the discharge. In frequency of occurrence, acute purulent otitis media forms the third great group of children's ailments. Involvements of the respiratory tract—colds, acute adenoiditis and pharyngitis, bronchites, and pneumonias—form the first group; intestinal upsets the second group, and ear infections the third group. As all the acute infectious diseases of children, together with the ordinary colds, list acute purulent otitis media as complications, it is most essential that each physician who is called upon to treat these little patients should be able to diagnose the condition and intelligently direct its treatment. It is the aim and object of this paper to contribute something to this end.

Etiology.—Acute purulent otitis media in children is practically always secondary to a nasopharyngitis. A very large majority of the children that suffer from running ears are also sufferers from adenoids, and are temporarily or permanently mouth breathers. The extension from the pharynx to the middle ear occurs in two ways. In the ordinary "colds" of children the adenoids are swollen and interfere with breathing and drainage from the epipharyngeal space. As the child lies on its back the secretions from the nose collect in the epipharynx and are added to the secretions of the pharynx itself. In the act of swallowing, coughing, or gagging, there is a violent contraction of the pharyngeal constrictors, together with the palatoglossus, palatopharyngeus and levator palati muscles, causing a reduction in size of the epipharyngeal or postnasal space and the opening of the eustachian tubes. By this means contaminated secretions are forced from the epipharynx into the middle ear. This infectious material initiates an inflammatory process, and as this is established in the middle ear the mucous membrane becomes swollen and congested, and the otitic end of the eustachian tube is occluded, resulting in a closed abscess cavity.

In other instances of inflammation of the mucous membrane of the nose and throat the infection is severe from the start, and there is a rapid spread of the inflammatory process by lateral extension along the pharyngeal and nasal mucous membrane to neighboring structures. In this process of lateral extension the eustachial tubes participate and the infection is thus carried into the middle ear. These are the cases, of course, that give the more violent symptoms. And they are also, in my opinion, the cases that respond more rapidly to treatment, in that they are recognized and receive treatment at an earlier stage. From this class, also, are the cases that go on to rapid mastoid infection, in spite of the most careful treatment.

In such systemic infections as typhoid fever and lobar pneumonia, proved to be primary bacteriemias, there may be a true hemogenic implantation of the infecting organisms. This may be true also of infections of unknown nature, such as influenza. However, such a method of initiating an acute purulent otitis media is not proved. In scarlet fever and measles, infections of undetermined nature, the path of extensions to the middle ear is not known. The otitis media may be due to the specific organism, whatever that may prove to be, responsible for the condition. As a streptococcal pharyngitis is a prominent symptom of both of these conditions, however, I am of the opinion that the ear infection is of a streptococcal nature, and that the involvement is by direct extension.

Bacteriology.—It is now generally conceded that the micro-organisms almost invariably find their way into the tympanic space through the eustachian tube. The character of the invading organism and its virulence are potent factors in determining the clinical picture; this together with variations in degree of the resisting power of individuals explains the difference in the course and termination of the attacks. In one case resolution will follow incision and drainage of the middle ear, while in a second case cure is not effected until the mastoid process is opened.

Secondary infections occasionally enter the tympanic cavity through a perforation in the drumhead, and many observers contend that a tuberculous invasion may also enter the tympanic cavity by way of the lymph channels and the blood-streams.

The organisms most commonly found are the streptococcus, pneumococcus, pyogenic staphylococcus, Friedlander's bacillus, tubercle bacillus, diphtheria bacillus, and influenza bacillus.

Diagnosis.—There is but one method of detecting all cases of acute purulent otitis media in babies and small children in the early stages—that is, a direct inspection of the tympanic membrane. In no other way can the changes in the contour and color of the drum and auditory canal be appraised at their true value. Aside from the redness and bulging of the drum membrane in acute purulent middle ear infections, there may not be pain in the infected ear, and the symptom of the localization of pain in children is easily overlooked or misinterpreted. In addition to the pain in the middle ear, there may sometimes be a slight pain in the tragus on pressure. Likewise, there may also be pain over the mastoid, especially at the tip, in the early stages of the infection. Fever may or may not be present as an accompaniment of acute ear infections. If fever is already present, as it usually is prior to the purulent invasion, its significance in a child in the midst of or recovering from a cold, measles, scarlet fever, or other acute infection, is difficult of interpretation. It must be remembered also that simple pharyngitis in children may give a temperature of 102° or 103° with no other involvement. In some cases these children look septic to a degree difficult to explain in the absence of a careful ear examination, but this is not a constant symptom. In some rare cases, where the eustachian tube remains open, pus may be present in the middle ear without bulging of the drum membranes. Such cases present extreme difficulties of diagnosis, and sometimes leave otologists in doubt as to the actual condition present. At a later stage of the infection there is a discharge from the infected ear, and the diagnosis is established. But the condition should not be allowed to progress to that extent where anyone can make the diagnosis from a dirty pillow. Of the four cardinal symptoms of acute purulent otitis media, pain, fever, discharge and bulging of the drum membrane, only the last is constantly present and unmistakable in its interpretation. The extend of the change in the fundus of the canal varies from simple "Bellying or Ballooning" of the membrana tympani to a collapse of the superior canal wall, with a pushing outward of the membrane to such an extent as to obliterate the fundus landmarks, or even to render it doubtful where fundus and canal wall join each other. But the question is not so much one of extent of the changes in contour as it is one of whether such changes are present.

Prophylaxis.—There is only one important item in the prophylaxis of acute purulent otitis media in children: Adenoids must be removed from all children who show any tendency to mouth breathing when asleep, and from all children subject to recurrent colds. Even in the absence of these symptoms, if a digital examination of the ephipharyngeal space reveals the presence of adenoids in excessive amount, they should be removed. Mother and nurse must be repeatedly queried as to whether the child sleeps with its mouth open. Too much stress cannot be laid on this one condition. If the child's whole postnasal space is filled with adenoid tissue, or nearly filled, it will, with the slightest pharyngeal congestion, "catch a cold," and run the risk of having this cold extend to the middle ear through the eustachian tube. In the few cases in which nasal obstructions occur in children this must be relieved. If the child continues to have a "running nose" after a complete adenectomy in competent hands, then the question of an ethmoidal infection must be considered, and, if present, must receive the proper operative treatment. Nasal sinus infection in children is rare, as all the sinuses are rudimentary in character at the ages under discussion. In addition to removing adenoids and nasal obstruction and infection when present, that series of precautions calculated to prevent children from taking colds should be instituted, if anyone knows what will accomplish that result.

Course and Prognosis.—The course of acute purulent otitis media may take one of three general variations. These, in the order of their desirability, are as follows: First, an uncomplicated progress to a cure. Second, there may be the development of a mastoiditis, with operation and recovery. Third, and most undesirable, the ear may become a case of chronic purulent otitis media, with the accompanying loss of hearing. If the disease is terminated without undue delay, and the drum membrane is returned to normal, there will be no effect on the patient's hearing, which will return to the normal for that individual, that is, to his normal of before the attack. If the process involves the mastoid bone, with

destruction of its cellular structure, and a proper mastoid operation is performed, with recovery without undue prolongation of the middle ear infection, then the hearing should still be returned to the condition in which it was before the ear became involved. If the mastoid operation is incomplete, and the middle ear infection continues for an undue time after the operation, with the formation of granulations in the middle ear and attic and the ultimate existence of scar tissue after healing has occurred, then the hearing will not return to normal. If the existence of the mastoid involvement is overlooked, then the patient is liable to the complications of a neglected mastoiditis—brain abscess, meningitis, sinus thrombosis, and septicemia. A discussion of these, however, is beyond the proper limits of this paper, and more properly comes under the discussion of mastoiditis.

In those neglected or improperly treated cases of acute purulent otitis media that are allowed to become chronic the amount of useful hearing that remains to the patient is problematical, but will be slight. In addition to this loss of hearing, the patient rests under such a load of danger to his life that he is not usually accepted as a risk by life insurance companies until he has undergone a successful radical mastoid operation. Aside from this danger to life in chronic purulent otitis media, the care of such an ear is a burden to the patient, and he is, in many instances, obnoxious to those associated with him because of the disagreeable odor to the discharge from the ear.

Treatment.—Once a purulent condition has established itself in the middle ear of a child, no time should be lost in making a wide opening through the drum membrane. This should be done under a general anesthesia, unless the purulent condition has supervened on a severe lung involvement. In that case the physician in charge must judge whether the shock of opening the drum without anesthesia will be more injurious to the patient.

The choice of the anesthetic to be used must be left to the physician who is going to administer it, if he is at all experienced. Ethyl chloride in experienced hands—(Gwathmey has now declared it safe, New York Medical Journal, June 19, 1920)—is an ideal anesthetic for these short operations. The patients go under quickly, remain under lightly, and come out quickly, and there is a minimum of post-anesthetic nausea. Also, there is less stimulation of the secretions than with almost any other anesthetic. If an inexperienced anesthetist must be accepted, the following would seem to be a safe rule: In children under six months, a few drops of chloroform on a handkerchief, with careful watching and prepared to change to ether on the slightest indication. From six months to two years, ether is safe and the primary anesthetic stage gives ample time to do a double myringotomy, so that there is but little nausea in most cases. From two years up, when the respiratory muscles have sufficiently developed for rebreathing, nitrous oxide alone or combined with oxygen is a very satisfactory anesthetic. However, this requires more apparatus than is usually available.

The incision is curved, paralleling the posterior periphery of the drumhead. This severs both the radiating and the circular fibres in the drum and tends to cause the incised wound to gap and thus favors drainage of the tympanic cavity. Care should be exercised that the knife blade does not impinge upon the ossicles, and the entire procedure must be characterized by gentleness. Experience has shown that in these cases the drumhead is often very thick, and therefore the incision must be made long enough to cause a gaping wound. In children the horizontal slant of the drum may cause the inexperienced to either miss it altogether, or only make a slight incision because the lower parts are missed by the knife; therefore, the blade must be introduced sufficiently deep to incise the entire extent.

Having established free drainage through the drum membrane, the treatment divides itself into two categories, that directed to the nasopharyngeal space, whence the infection originates and the source from which it is maintained, and that directed toward the relief of the purulent condition in the middle ear itself. Babies and small children cannot be taught to gargle, and besides a gargle does not reach the spot that is maintaining the infection—the adenoids. For this reason I am accustomed to instruct the mother or nurse to place the child on its back and allow about a medicine dropper full of some antiseptic solution to flow through the nose into the post-nasal space. This should be done every two hours, at the same time the ear is irrigated. For this purpose there is nothing superior to Dobell's solution, or this may be diluted with an equal amount of physio-

logical saline. It will also improve the action somewhat if enough adrenalin chloride is added to make a strength of 1-10,000. The alkali in Dobell's solution helps to dissolve the mucus from the nose and throat, and carbolic acid acts as an antiseptic and astringent, the adrenalin helps in contracting the tissues and improving the drainage; the whole hastens the return of the nose and throat to a condition of health—otherwise it cures the "cold." As the nasal discharge lessens it is sometimes advisable to substitute argyrol or some other astringent antiseptic for the Dobell's solution used in the nose. If the pharynx, including the tonsillar region, shows much inflammation, this treatment of the nose can be supplemented by swabbing the throat. This is conveniently done by wrapping a piece of gauze or other soft cloth about the finger and moistening it with Dobell's solution and swabbing the pharynx thoroughly.

As the amount of discharge from the middle ear lessens, the intervals between the irrigations should be lengthened until the ear is irrigated three times a day. This number of irrigations should be continued until an inspection of the ear reveals a drum membrane so far restored to normal that the incision is healed and the landmarks restored.

In uncomplicated cases the child should be kept quiet in the house, while in severe cases the patient should be put to bed and given a light diet. The bowels should be kept freely open with some mild laxative. Broken doses of calomel in 1/6-1/10 gr. is my choice.

Douching the ear every hour or two with warm boric acid solution often gives relief. I am in the habit of following up these douches with an installation of a solution of: camphor, menthol, phenol aa gr X, glycerin adqs ozs 1.

This seems to lessen the pain considerably, the glycerin being isotonic absorbs some of the fluids from surrounding tissue and relieves congestion; the camphor, menthol and phenol being slightly anesthetic and germicidal. All applications to the ear should be warm. The above mentioned solution is valuable in cases when there is congestion in the drum with a reddened malleus, but there is no evidence of pus or fluid back of the drum. Of course this treatment is carried out only when the drum is not bulging or there is no evidence of pus in the middle ear.

If the skin becomes irritated and eczematous under the irrigations with water and the antiseptic drops long continued, it should be protected by applying some ointment with a vaseline base each time before the irrigations are to be carried out. Borated vaseline or boric ointment are as good for this purpose as anything else. Unless the child is in the hospital or under the care of a very competent nurse with special ear training, I am of the opinion that gauze wicks placed in the ear are of little value. The wick becomes foul and defeats the very purpose for which it was used—the rapid carrying away of the pus. Also the changing of a wick requires the most deft manipulations to prevent traumatism, thus giving the added risk of furuncle formation. But the real danger of using gauze wicks in the canal of a child is the failure on the part of the parents to carry out instructions. Each otologist sees cases in which a gauze wick has been placed in the canal in a case of purulent otitis media, and the patient has shown in the office of another otologist days or weeks later, perhaps with a developed mastoiditis.

The time required to effect a cure varies widely with different patients, but perhaps between one and six weeks will be a safe limit as to time requirements. It is necessary, however, to fix mentally a definite time limit for the treatment of a case of acute purulent otitis media in a child, and beyond this the discharge must not be allowed to drag along. I am accustomed to place this time limit at between three and four weeks' time, depending on the physical condition and progress of the individual patient. If at the end of this time the discharge does not give very definite indications of ceasing, it becomes necessary to consider more vigorous methods of treatment. The first of these is the removal of the adenoids.

If the adenoids are removed and the discharge threatens to become chronic, it becomes necessary to consider the advisability of performing a mastoid operation, even in the absence of positive symptoms of mastoid involvement. Under no consideration must an acute ear be allowed to become chronic. A healed mastoid wound with good hearing is preferable to a chronic running ear and the loss of hearing. If the infection has so far involved the antrum that the discharge does not yield to the usual forms of treatment, then the preservation of the hearing is so important as to justify this further step.

OSTEOMYELITIS*

Diagnosis and Newer Methods of Treatment.

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In presenting this subject, about which much has been written and regarding which probably there is more of divided opinion than any other destructive bone lesion, I wish to bring out a few fundamental principles which, if followed out, have been shown to yield very gratifying results.

Osteomyelitis is an acute suppurative inflammation of the bone, *always* due to infection of the bone marrow by pyogenic-organisms.

Etiology.

(a) *Direct causes—Some pyogenic micro-organisms.*

1. Staphylococcus pyogenes aureus the most common and produces the most typical and extensive bone destruction.
2. Staphylococcus albus and citreus next.
3. Streptococcus in a few cases.
4. Pneumococcus.
5. Bacillus typhosus.

Whatever the nature of the infectious agent, it can usually be isolated in pure culture. In the chronic cases we sometimes get several micro-organisms such as pyocyanens, B coli, etc.

(b) Predisposing Causes.

1. Adolescence. The incomplete development of bones is probably a contributing cause of the incidence of 50% of the cases between thirteen and seventeen years of age, usually boys.
2. Exhaustion and exposure.
3. Trauma with or without demonstrable injury to the overlying skin.
4. Infectious diseases, as measles, scarlet fever, smallpox and typhoid fever.
5. Compound fractures.

(c) Methods of Infection.

1. Secondary to other pyogenic lesions, e. g. furuncle, paronychia, ulcer, etc.
2. Respiratory tract, pneumonia, pleurisy or empyema.
3. Intestinal tract, e. g. typhoid.
4. Primary infection, when it is impossible to demonstrate the portal of entry of the infectious agent.

Location.

The site of election is the diaphysis near the epiphyseal line. This is contra-distinction to tuberculous bone lesions which usually originate in the epiphysis.

Chronic focal osteomyelitis of the upper or lower ends of the tibia is known as "Brodie's Abscess" and was first described by Sir Benjamin Brodie in 1832. The tibia ranks first as the commonest of sites of osteomyelitis, and trauma probably has a large part here as the shin is subjected to injury probably more than any other bone in the body. The femur and humerus are next, but any bone may become invaded, including the phalanges or flat bones.

Pathology.

The primary focus is in the bone marrow, the cortex and trabecula being involved secondarily.

The portion of the diaphysis near the epiphyseal line is the point of election. The epiphysis is rarely attacked, but when invaded, extension to the neighboring joints occur early.

Soluble toxins are produced by the bacterial growth and cause necrosis of the marrow cells, and we often find a gelatinous mass in the marrow before marked purulent infiltration. The marrow when seen early is gelatinous and hyperemic, and on microscopical section it appears mottled with yellowish or greenish foci of suppuration and also reddened areas of injection or hemorrhages.

Bone abscesses are present but small in size, and among all of this we see some small areas of normal marrow.

Subperiosteal abscesses will appear early by extension of the process through the Haversian canals of the cortex, and the periosteum may be elevated over a large area. Later on we get a subcutaneous inflammation and superficial abscess formation.

As the process progresses, the whole medullary cavity is invaded and sequestra are formed by the process attacking the cortex.

The march of pus in an untreated case sweeps through the medullary cavity like wild fire and it is not unusual to see the whole medullary cavity filled with pus within seventy-two hours from the onset.

Because of the impermeability of the cortex and rapid extension of the process through the marrow, there is a great absorption into the blood and lymph streams, causing the high fever of a severe toxemia which, if not evacuated, may lead to a general septicemia.

Repair.

Repair takes place by natural processes in the event of spontaneous evacuation of the abscess, or as the result of operation.

I will not go into a discussion of the histological changes in the process of repair, but will quote Dr. Lawton Thornton in his article. Treat-

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ment of Osteomyelitis" in the April, 1927, issue of the Journal of Bone and Joint Surgery.

"The life history of bone cells and natural processes of repair become of special interest to one who intends to treat osteomyelitis. The early changes which occur in bone in acute osteomyelitis are not revealed by roentgenograms, but a microscopical study shows both destructive and productive processes taking place.

"In the diseased cortex and medulla we see dead and dying bone cells in large areas, surrounded by bacteria and leucocytes. The same bacteria and toxins which have destroyed the deeper bone cells are here stimulating the production of new bone. The same factor which produced the sequestrum by destroying the life of the bone, causes the periosteum to generate involucrum.

"A cross-section of the subperiosteal area shows budding capillaries growing from the detached periosteum toward the diseased cortex. New bone cells are seen everywhere among the loops of minute blood vessels. Bacteria and leucocytes are seen in great numbers in this new granulation tissue. A section through a similar area at a late date would show the osteo-blasts have taken possession of this subperiosteal area, and converted it into new bone. This young bone is first seen in its cartilaginous state, but as lime salts are deposited, it soon resembles the new bone of callus formation in fractures. Bacteria and leucocytes are eliminated and after a time it becomes healthy bone. In the early stages of the disease, drainage by incision is an emergency measure and the more quickly drainage of the medullary cavity is established, the less extensive the destruction and less the prostration of the patient."

Symptoms and Physical Signs:

1. Pain is the usual symptom of onset. Sudden, local, severe and throbbing, and is referred to the shaft of the bone usually near the epiphyseal line. It is increased by faint percussion of the bone or by continued pressure.

2. *Swelling.* This may come very early, and skin over affected area may be reddened and pit on pressure. May get no swelling, however, if pus has not broken through the cortex.

3. *Joint tenderness.* Heat, swelling and tenderness of the joint nearest the lesion is due to the edema of inflammation rather than to direct joint infection.

4. *Fever.* Usually 103 to 104 accompanies onset of pain.

5. *Pulse.* 120 to 140 is usual.

6. *Toxemia.* The patient *looks sick.* As a result of absorption we get the usual picture of a severe toxemia. The face is flushed and delirium is sometimes seen.

7. *Abscesses* (of soft part or a sub-periosteal abscess) are the rule.

8. *Sinuses,* lead directly to necrotic bone and are usually actively discharging pus.

9. *Hyperleukocytesis* is incidental to suppuration and is usually very high.

Differential Diagnosis.

The above train of symptoms is usually the rule, and ought to render some mistakes uncommon. The following affections may in some cases cause confusion.

1. Acute early joint tuberculosis. There is swelling, abscess and sinus formation about the joint. It begins in the epiphysis, (osteomyelitis in diaphysis). It is insidious onset, (osteomyelitis is acute). Pain and constitutional symptoms late, (early in osteomyelitis). Slight or moderate p. m. temperature only. X-ray (shows destruction later). Spontaneous separation of epiphysis uncommon. (Common in osteomyelitis).

2. Acute articular rheumatism. Here we have pain, swelling, redness and local heat, fever, rapid pulse and local tenderness confined to the joint. There is an absence of bone tenderness. Usually poly-articular. Severity of infection is less.

3. Gonorrheal rheumatism. Severe early acute symptoms. Absence of bone tenderness. History of gonorrheal infection. Isolation of organisms from joint. X-ray, joint symptoms.

4. Typhoid fever. Severe typhoid state. Dulled mentally causing local pain to be unnoticed. Local symptoms may be absent. X-ray. Positive widal.

5. Bone tuberculosis. (Very rare in U. S.). Persistent discharging sinus. Local pain with or without healing. Insidious. Swelling not common. Toxemia not severe. X-ray.

6. Actinomycosis. Persistent discharging sinus. Absence of local signs of severe inflammation. Identification of the X-ray fungus. Toxemia not severe. X-ray.

7. Epidermoid cancer. Persistent swelling and discharging local sinus rare. Severe local inflammation. Toxemia absent. Patient above 40 years old. X-ray.

Treatment.

(a) *Types of Cases.* The cases coming in for treatment are of two general types.

1. Cases of massive infectious osteomyelitis (or the acute cases) in which the first consideration is to establish prompt and efficient drainage.

2. Cases in which there is a localized osteomyelitis, which is usually chronic and which requires drainage of the pus pockets and removal of sequestra.

(b) Treatment in general will be considered under three headings.

1. Abortive.
2. Curative for drainage and removal of sequestrum.
3. Reparative or reconstructive.

Abortive Treatment.

If a case is seen early enough, say within the first forty-eight hours, multiple large drill holes may be made through the cortex and allow the pus to escape, and drainage of the marrow cavity may serve to abort the infection of the entire marrow and prevent necrosis of bone or reduce it to a minimum. This was John B. Murphy's favorite way of treating the acute cases, but it has fallen into disuse, in general, in favor of removal of a large area of cortex and opening wide the medullary cavity to allow *real* free drainage. However it is worth while to use in the very acute cases, as it is better than nothing at all, and prevents the formation of sequestra.

Curative Treatment.

Treatment of the acute stage. In this stage the surgeon is confronted with the active infection and necrosis and suppuration. The primary consideration is immediate drainage and evacuation of pus as in any other pyogenic process. For quick and effective entrance to marrow canal, the author has found the Albee motor driven instrument superior to any hand tools. Multiple large drill holes are made in the affected area through the cortex into medulla. If pus is revealed through these holes, which should be for a distance above and below the affected area, a trough is made with the twin motor driven saw through the cortex into the medullary cavity. This opening should be enlarged until no more pus is revealed. If motor driven instrument cannot be had, this can be done with a gouge, or a chisel and mallet, a gutter being made up and down the bone until no more pus is encountered. The ends of the longitudinal cuts are now cut crosswise and the coxtex between the cuts is pried off with a chisel. Cureting of the marrow should be avoided as we wish to save as much of the endostium as possible for reparative osteo-genesis. If the epiphysis is involved it should be opened over a part of its cortex as the diaphysis, but the epiphyseal line should be avoided. If the neighboring joint is involved it should be incised, irrigated and drained. The entire wound produced by the operation is left open and thoroughly packed with vaselined gauze from the bottom of the medullary canal to the skin margin, and efficient drainage of the bone is maintained until the periostium has produced a thick involucrum (as indicated by X-rays). The procedure in the chronic cases is the same as the acute, only with the removal of sequestrum which readily shows up in the marrow cavity after the cortex above it has been removed. It is advisable to do these operations under a tourniquet when possible, as a clear field is necessary for good work.

All sinuses should have a flexible probe run down to the depth of them, and then the cortex is chiseled away down to the end of the probe. In this way we eliminate all small pockets which may cause trouble later. An incomplete operation is a useless one and means persistence of the disease. When a complete operation is done a permanent result may be expected. It is absolutely essential that all bone sinuses be eliminated, regardless of the amount of good bone that has to be sacrificed, because an infected penetrating bone sinus will not remain healed unless the source has been eradicated. Deep cavities must be made shallow and the bone everywhere should be made smooth. If in removal of a large amount of bone through operation there is danger of the bone being weakened to the point of danger of fracture, a plaster cast should be applied. Absolute fixation of the part is necessary for success, whether a splint or plaster cast is used.

Reparative Treatment.

In certain cases where all or part of the shaft of a bone has been destroyed by osteomyelitis, reconstructive methods are necessary. The tibia is the bone most adapted for this purpose and also the humerus and femur. In the case of old chronic osteomyelitis of long standing where bone destruction has been extensive, a radical operation is done in which all dead bone, sinuses and sequestrum are removed. The raw surfaces are allowed to granulate in and all infection is cleared up. Six to eight months after the wound has healed and it has been made certain that no infectious process remains by physical and X-ray examinations, a bone graft may be done by freshening up the ends of the old fragments and transplanting a large, strong, healthy bone graft containing all bone layers, into the two ends of the affected bone. Numerous cases of this kind have been done with very gratifying results.

the tibial transplant, that is from one tibia to the other, probably being the most successful, and rendering an otherwise useless extremity, useful. Great care must be taken in this type of work, however, as it is absolutely necessary to have the field of operation sterile before doing the transplant.

SUMMARY.

1. Early drainage of the medullary canal is an emergency measure.
2. Early diagnosis saves the patient time as well as the operator.
3. Removal of the focus of infection in an acute case will prevent a chronic case, with all its complications.
4. Complete eradication of all sequestra and sinuses is necessary for the best results.
5. Incomplete operations are useless.
6. Periodic post-operative X-ray examinations of affected bone.
7. General condition of patient must be built up to the highest degree for the best results.

DIFFERENTIAL DIAGNOSIS OF ABDOMINAL LESIONS*

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In choosing "Differential Diagnosis of Abdominal Lesions" for my subject, I was not unaware of the fact that in the time allotted it would be impossible to go into details, but I do hope to bring to you some points, not only of general interest, but of more or less importance in making a diagnosis of the very many conditions that produce these more or less obscure abdominal pains. In dealing with the subject, I shall enumerate them in the order of frequency, placing first appendicitis; second,—and in this some may disagree with me—lesions of the kidney and ureter; third, gall-bladder and bile ducts; fourth, female genitalia; fifth, stomach and duodenum; sixth, lesions of the intestinal tract, covering such things as tumors, diverticula, adhesions, etc.; next in order, the pancreas, the liver, such as abscess and gumma; and the spleen.

In considering abdominal pains, it is well to take into consideration the character of the pain, remembering that "colicky pain" is spasmodic in character and due to distension of the hollow viscera, therefore we should expect to find the lesion in the gall-bladder, appendix, gastrointestinal tract, kidney and ureter, or fallopian tubes; while pain which is constant in character is due to an offended peritoneum. Pain in the kidney, ureter, or fallopian tubes may be more or less constant due to the fact that peristalsis is not marked in these organs.

We should also take into consideration the lesions which are most likely to occur at certain ages. For instance, if our patient is a young man with a pain in his abdomen, we would not expect to find either gall-stones or gastric or duodenal ulcer, but would remember that in this type of patient the appendix is by far the most frequent offending member. Suppose, however, that our patient is a female in the thirties, who has borne several children, and has a high abdominal pain. We should suspect a lesion of the biliary tract in this type of patient. Again, if the patient is a man in the early thirties with pain in his upper right quadrant, we would remember that in this type of patient we frequently have to deal with gastric or duodenal ulcer. If our patient is past sixty, with rather obscure pain in abdomen, with attacks of colic and marked peristalsis, we might expect to find circular carcinoma of the colon.

Careful history should be obtained in all our cases, inquiring if this is the first attack and the nature and duration of previous attacks; the first symptom of this attack, whether the pain is the first symptom, as is the case in appendicitis, or if it is a later symptom, and whether it is colicky or constant in character.

We do not believe that the term chronic appendicitis should ever be used, but prefer to use the terms—acute appendicitis, recurring appendicitis, or appendicitis dormant. We should hesitate to operate on anyone for appendicitis whose history does not reveal one or more acute attacks, even though mild, which may have been called indigestion. It is certainly not gratifying, and is sometimes embarrassing, to the surgeon to have his patient return following appendectomy with the same complaint as he had before operation, and all of us have seen numerous scars on the right side of the abdomen which did not furnish relief.

In the typical case of ruptured ectopic pregnancy, a diagnosis should be easily reached, but I have had this condition two weeks following the rupture, with the abdominal cavity full of blood and a peritonitis. We find this most often in women who have gone several years without pregnancy, with a history of menstrual irregularity or spotting for the past two or three

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months, and with dull pain in the pelvis, either right or left side. They are suddenly seized with a very severe pain, which is constant, due to the blood being poured out into the peritoneal cavity, usually with fainting spells and all evidences of shock. It is needless for me to dwell on this or to urge immediate and proper treatment.

Now let us suppose the patient is a woman in her thirties, who has lived a normal life and has borne children, with more or less indefinite pain in the right side. We would have to make diagnosis by way of elimination. We would first make pelvic examination. Remembering that the most frequent lesion in this type of patient is gall-stones, we would have a Graham test or coleocystography done. If there is no filling defect in the biliary tract, we might suspect renal calculi or infected kidney. Urinalysis in these cases may fail to give you information regarding lesion of the urinary tract, due, sometimes, to the ureter being blocked and our specimen coming from the other kidney. X-ray examination of the kidney and ureter without the ureteral catheter in place is not worth the effort, not mentioning the expense, as 60% of ureteral stones do not show on X-ray, while we may have blocking of the ureter from a kink or stricture which would not show. Therefore, we always introduce a catheter into the kidney and in this way find the obstruction, if any, in the ureter and obtain specimen from the kidney for pus. After this a pyelogram should be made. Following this, if no trouble has been found, a fluoroscopic examination of the stomach and duodenum should be made. If there is no pelvic trouble, no lesion in the urinary tract, no filling defect in the gall-bladder, and no filling defect in the stomach and duodenum, we should be safe in saying that the lesion is intestinal, probably appendicitis.

Without going into detail, I shall mention four cardinal symptoms of intestinal obstruction—pain, vomiting, obstinate constipation, and borborygmus—the peristalsis in some cases being visible, differentiating mechanical obstruction from paralytic ileus, where the coils may be visible without peristalsis.

The diagnosis of perforated duodenal ulcer is usually made from history of the excruciating pain coming on suddenly and the patient showing evidence of shock. There is usually a history of indigestion but this is not to be relied upon. One must not forget that hemorrhagic pancreatitis might produce these symptoms.

By careful inquiry, if the lesion is in the urinary tract, a history of frequent urination is usually obtained. The pain is more constant in character, as a rule, than when the lesion is in the abdominal viscera. It generally radiates to the inner surface of the thigh to the vagina or testicle, and fist percussion over the kidney will often locate your lesion.

A physician's son, aged 22, was referred to me with diagnosis of appendicitis, this being his first attack. He had enjoyed good health all his life and was strong and robust—in fact, danced all the night before. He had a temperature of 104, which is very unusual in acute appendicitis without complications; pain more or less general on the right side. On account of the high temperature and some pus in voided specimen, I advised X-ray examination of the kidney and ureter and I wish to show you the film. You will notice large renal calculi, bi-lateral, and specimen of urine, obtained separately from kidneys, showed pus in both.

Another case, man, aged 40, with negative history, was working in field, when he was suddenly seized with excruciating pain in his abdomen. Diagnosis of appendicitis was made and the usual conservative treatment given him. Twenty-four hours later, when I saw him, he had a very rigid abdomen and temperature was beginning to climb. His leukocyte count was 11,000 with 80% polys. The diagnosis of perforated ulcer was made and operation done. We found a perforated ulcer, but fortunately the man's stomach was empty when it perforated and had been kept empty, and he recovered after the operation. I want to stress the importance of early operation in these cases, for within the first six hours the mortality is low, but increases with tremendous rapidity until within twenty-four hours the mortality rate is at least 50%.

Another case: man, aged 38, weight 215 pounds, who attended a football game on Saturday. When leaving the field, he was seized with more or less constant pain in the right iliac region, of dull and aching character. He had dinner at the hotel with a party of friends, but the pain increased during the evening. He was seen by a physician on Sunday morning, after having obtained a free bowel evacuation by taking laxatives. He spent a very comfortable Sunday, but on Monday morning had considerable soreness

and muscular rigidity of the abdomen muscles on the right side. He was brought into the hospital, where we found his leukocyte count was 7500 with 72% polys. Urinalysis was negative. I asked our urologist, Dr. Lester, to make a cystoscopic examination and I want to show you the film. You will notice that it was impossible to pass the ureteral catheter by an obstruction within one inch of the bladder wall. The second day following this examination, he introduced a Bougie through this obstruction and has continued to dilate it until he is able to pass a No. 6 ureteral catheter, without difficulty.

Some years ago I had a patient referred to me, aged 35, male, who had for the past few years been told by several physicians or surgeons that he had gall-stones. There was a palpable mass in the gall-bladder region. Urinalysis and blood counts were negative. I made a diagnosis of gall-stones and advised operation, along with the others. Upon making an incision for removal of the gall-bladder, I found a large polycystic kidney, which I then had to remove through the abdominal incision. It would have been easier for me, as well as more satisfactory for the patient, had the diagnosis of polycystic kidney been made before the operation, and it could have been done had we not taken so much for granted and gone into the case in a more intelligent manner.

Another case which I would like to mention in this discussion, to show you how we may be misled unless we give our cases thorough study, is one which was referred to me following several years of abdominal symptoms and a history of numerous diagnoses, all centering on abdominal lesions. The man, aged 39, who for several years had complained of pain in the upper abdomen and loss of weight—he was unable to take enough food to sustain his strength and weight—frequent attacks of pain for which he had to have hypodermics. He had been advised that he had gall-stones and duodenal ulcer. Physical examination was negative except for a tenderness over the upper right quadrant, diminished knee jerks, and one irregular pupil. Due to the diminished knee jerks, and the irregular pupil, which I attributed to have been the result of an iritis, a clinical diagnosis of tabes was made, despite the fact that infection was denied. A blood Wassermann was negative, after which a lumbar puncture was done and spinal fluid obtained, which showed positive 4 plus. This man was put on tryparsamide weekly, and gained thirteen pounds in thirty days. He was really starving to death and when he found that he could eat, he gained very rapidly.

In making differential diagnoses, we must remember that no one approaches 100% accuracy. Dr. Bevan and Dr. Sippy, working together and calling to their assistance the X-ray laboratory, clinical laboratory, pathological laboratory, and men in other specialties, arrived at the conclusion that an absolutely correct anatomic and pathologic diagnosis was possible in only 80 to 90% of their cases. However, they considered errors in diagnosis where they found other lesions than the one for which they operated. For instance, if they made a diagnosis and operated on a patient for cholecystitis and found another lesion of the gall-bladder, they classed that as an incorrect diagnosis. The term "acute abdomen" was coined to cover such cases where it was impossible to make a more definite diagnosis, but where surgery was indicated. I do not want you to think that I would have you subject your patient who is acutely ill to any unnecessary procedure to clear up the diagnosis. For instance, a patient in an acute attack should not be subjected to the Graham test, and though it is a tremendous advantage to the surgeon, as well as a satisfaction, to know that correct diagnosis had been made, it is comforting to know that after he has opened an abdomen, though he did not find what he expected to find, that the condition which was found was one requiring surgery.

This subject was presented for the purpose of urging that a thorough, painstaking history and physical examination, together with any necessary laboratory or X-ray examinations, be made on patients suffering from obscure abdominal pains, who place themselves under our care, as it is our duty as members of this profession to not only apply surgical treatment where indicated, but to protect our patients from unnecessary risks—as well as economic loss. And we shall have to admit that there is a risk attached to any abdominal surgery, no matter how simple. There is some risk attached to the anesthetic, besides the expense, loss of time, and inconvenience to the average individual, of hospitalization and surgery. Besides, I believe that if we work our cases out carefully and reach as far as possible a correct diagnosis, that we shall be able to talk to the patient intelligently about his condition, and be able to benefit him instead of having him drift from one to another, seeking relief from his ailments.

PYOGENIC INFECTIONS ABOUT THE LIVER*

JOHN R. BOLING, M.D., F.A.C.S.,
Bradenton.

In discussing this subject I am going to confine myself to localized abscess formation in the region of the liver other than that of the gall-bladder, which is the more common and easily recognized. On first thought, it might seem that I am confining myself to a narrow and rather rare field. Such is not the case, for although abscess in this region is not of every day occurrence, such as we find in lower abdomen, it occurs often enough to keep us constantly alert.

We are fully aware that pus formation in any part of the body is prone to cause abscess in other regions, either by direct extension or by way of lymph stream or blood stream. Thus, although the usual cause of abscess about the liver is within the abdomen, it is not always so. The most usual location of abscess about the liver is between it and the diaphragm, where it gets the name subphrenic—under the diaphragm. It may occur to the right or left of falciform *ligament*, behind the right coronary ligament or in lesser peritoneal cavity, the more common site being behind the right coronary ligament.

For two very definite reasons is this condition difficult to diagnose. One is the fact that it is deep-seated, being between the diaphragm and the large solid liver, making difficult the early detection of physical signs. The other is, because of the presence of the original infection, the liver, leucocytosis and continued illness is attributed to this and a thorough search is not made as would be the case if the mind of the surgeon were not centered on this alone. The correct diagnosis on this, as in many other conditions, is often missed because of lack of effort rather than lack of knowledge.

As above stated, any pyogenic infection in the abdomen may cause a subphrenic abscess and it behooves one to be always on the watch for this complication. It is seen following an appendicitis, perforating gastric or duodenal ulcer, typhoid or peritonitis of pyogenic form. These cases of peritonitis in which the primary lesion has been attended to, but which continue to run a septic temperature, possibly chills and sweats with leucocytosis, are the ones to suspect. The upper abdomen should be carefully watched for tenderness and dullness and X-ray made use of, for, as before stated, diagnosis is not always easy.

The most common cause is duodenal or gastric ulcer. I wish to report here a case as illustration:

April 1, 1927—W. W., a boy of 15, admitted to hospital complaining of pain in upper abdomen. Family history unimportant. Past history: we found that he had since the age of three, when he drank kerosene, complained of indigestion and had been always somewhat subnormal and underweight. Ten days prior to admittance, he had, while playing, a sudden, sharp pain in epigastrium. His family physician saw him at that time, finding him in considerable—but not excruciating—pain, abdomen soft, no rigidity, pulse and temperature about normal. In spite of the fact that his bowels had not moved in four days, cathartics were not given and nothing allowed by mouth. The following day, the boy was better, no pain but some tenderness, no rigidity. After about three more days, as the boy seemed well and was up and about, the physician saw him no more until day of operation, when he was called to see the boy because of pain and soreness in upper abdomen. At this time, the boy had temperature of 103, pulse 104, respiration 24. There was marked rigidity of upper abdomen in region of gall-bladder. He had leucocytosis of 16000 at this time. He was brought to the hospital and operation advised, the preoperative diagnosis being abscess following ruptured ulcer, abscess of gall-bladder or liver. When he was anesthetized, a mass was definitely felt in upper abdomen just to right of midline. Incision made directly over this mass. A well walled-off, colon-odored abscess was found extending down under left lobe of liver, back down in region of duodenum. Pus was sponged out and cigarette drain inserted, nothing more being done. He reacted well. Two days later, he was given one ounce of methylene blue solution by mouth for diagnosis. The following day the pus was of bluish hue, making diagnosis of duodenal perforation clear. Diagnosis of this type of abscess is a great deal easier because there is no other infection to mislead you and because it pointed below the liver.

The next case report was of a different type and one in which the primary lesion overshadowed the liver condition making the diagnosis more difficult and delayed. Mrs. C. M., age 36—admitted to hospital with diffuse peritonitis. Family history negative. Past history: Typhoid when young girl. Two children, moderate dysmenorrhoea. Present illness began one week prior to admittance. General abdominal pain.

*Read before the Midland Medical Society, Bradenton, May 4, 1927.

nausea and vomiting, pain localized somewhat in lower abdomen, somewhat more on right. Pain on voiding. Physical examination showed an obese woman, a blood pressure of 110-70. Head and chest negative. Abdomen: marked distention. Rigid over entire abdomen, tenderness somewhat more marked over right iliac. Vaginal: very unsatisfactory because of marked tenderness, distention and obesity. Temperature 100, pulse 90, respiration 20, urine negative. MBC 20000, hemoglobin 70. Diagnosis: diffuse peritonitis, probably from ruptured appendix. Ochsner treatment was established. The following day, there was a slight jaundice, next day a little more marked. Calcium chloride intravenously was started day jaundice appeared. There was no localized tenderness over the gall-bladder. The following day the jaundice was less and there was localized abscess filling pelvis. Operation on this, fourth day after admittance. There was abscess filling pelvis from naval down, made up of many pockets of colon-odored pus. The incision was midline, care being taken not to break through adhesions into upper abdomen, the pelvis on both sides containing pockets of pus, more so in the region of appendix. Because of the extensive adhesions and illness of the patient, no effort to find or remove the appendix was made. Pus evacuated by suction and drainage established. Drainage was profuse following operation and fourth day fecal material appeared. For four weeks, she rocked along slowly, temperature ranging from 99 to 101, draining freely. Then temperature went to 102 and under gas and oxygen the finger was inserted into the wound in search of pocket. Following this there was a profuse discharge of pus and the temperature dropped. This continued for three months, the patient gradually gaining, but still running some temperature. Then she began to complain of pains in the right side, about the level of the tenth rib, a slight bulging was noted and a diagnosis of subphrenic abscess made. This was opened between the ribs and a large amount of colon pus was evacuated. Drain tubes inserted. Following this she improved rapidly. How long this abscess had been present, I do not know—possibly, or probably, a long time—but because she was improving, although slowly, my mind was so centered on pockets about the wound that I did not find the subphrenic abscess until a late date.

Not all infections in this region come from within the abdomen as the two cases I have reported. Blood stream infection may give rise to abscess formation above the liver or in the liver itself. Because of unique blood supply of liver and excretory ducts, it is peculiarly exposed to infection. The great majority of infections occur through the portal stream, fewer through duct, and occasionally, through nutrient artery. It is of the latter type I wish to present this last case.

M. M., boy, age 6—Walked into the hospital complaining of pain and tenderness in upper abdomen. Family history: negative. Past history: usual diseases of childhood. Had had indigestion occasionally for several years. Typhoid inoculation one month previously. Present history: Illness began one week previously with pain in upper abdomen, lasting few hours, some diarrhea at this time. Three days later, pain returned, accompanied by tenderness in upper abdomen. He was up and about but could not straighten up because of soreness. Physical examination showed undernourished boy of poor color. Temperature, 101.8; pulse, 118; respiration, 28. Infected tonsils. Numerous infected areas on hand and forearm, resulting from bite of dog two weeks before. Chest negative except for systolic murmur. Abdomen showed no distention. Area about 2 inches in diameter, just to right of midline and below sternum, apparently circumscribed mass, firm, quite tender. Considerable rigidity over this area. W. B. C. 17200; hemoglobin 55. X-ray of stomach and duodenum, negative. No parasites or ova in stool. Diagnosis: liver abscess or abscess from ruptured duodenal or gastric ulcer. Operation revealed indurated area, 2½ inches in diameter, standing out on left lobe of liver. White area size of pea at apex, on verge of rupturing; no adhesions. Abdomen carefully walled off and trocar inserted. Pus was too thick to remove in this manner so opening was made larger with forcep and about four ounces thick yellow pus mopped out. Two rubber tubes inserted into abscess and carefully protected from abdomen by gauze strips. Recovery was rapid and uneventful. Smears of pus showed staphylococci. This abscess no doubt originated from blood stream infections, probably from infections on arm.

In conclusion, would state that of the three cases reported of the different types and sites of pyogenic infection about the liver, it is the second case that is the one that is most often confusing, because of the primary condition which so often masks the subphrenic condition.

HYSTERIA

D. M. Adams, M.D., and
J. M. Nixon, M.D.,
Panama City.

Too many times we see a patient and tell the family: "Oh, he is just nervous." Usually, such cases fill the purse of the charlatan, while if properly understood and treated, they could be saved untold suffering, the family saved expense, and anxiety, and a disorganized family brought back to understanding and happiness.

This article is written with the hope that the doctor who is not interested in nervous or mental diseases will be stimulated to investigate more thoroughly.

Hysteria seems to furnish one of the best examples of inherited morbid tendency. The conscious and subconscious are both component parts of the personality, the difference being only of degree.

An act at first becomes conscious and then subconscious in two ways—passing from the conscious as the picture on the screen, and again by constantly stimulating the sensory centers until reaction becomes automatic. In the first instance, the conscious act passes, to be replaced by another, while the latter can be performed during the consciousness of other impressions or acts.

Constant repetition of acts passing through the cortex produce common pathways as walking, thinking, etc. One sensory motor, the other sensory psychic. The degree of consciousness depends on the impressibility. Conscious impressions may come from both the external and internal through the special senses, also from the organs, and are constantly pouring in, some of which are conscious, and some so nearly unconscious as to leave little, or no impression.

Some individuals are hypersensitive to certain impulses or impressions and hypo to others, probably depending on past experiences, or as we say, perverted personality. When perceptions take place, physicochemical changes are occurring in definite proportions in the cerebral cortex. As impressions are going in, impulses are also coming out from the sensory centers. There must be an exact physicochemical balance in order for the personality, which is composed of all past impressions and experiences composing the sum total of both conscious and subconscious, to harmonize.

In hysteria there is no active consciousness, no picture on the screen. Consciousness is submerged. There is no control. The physicochemical balance is disturbed with two or more ideas trying to rise to consciousness at the same time, the common pathways possibly becoming sensitized to both sensory and motor stimulation producing the unusual distortion, both sensory and motor.

Delirium and convulsions—one symptom disappears to be replaced by another. The symptoms you are familiar with, and I will not discuss, other than to mention the anesthesias, and their probable causes being due to suggestion, or probably influenced by abnormal blood supply caused from disturbed nerve supply. There is no class of patients as susceptible to suggestion as those of hysteria, due to the blurred or submerged consciousness, having no will of their own. Examinations in those cases should be made with great care.

To Freud must be given the credit for starting a school of thought which has aroused widespread interest, rejected by some and accepted by others, and is gaining ground rapidly with the profession. Freud's doctrine requires acceptance of the conception of the subconscious or unconscious psychic processes. The all-important factor is the complex, which is capable of giving rise to ideas controlling the conscious train of thought, although the individual may not be aware of the nature of the complex. Also a state of mental conflict is set up by the presence in the mind of two or more opposing complexes, giving rise to a state of unpleasant emotional tension.

The conflict must be settled either by the mind relinquishing or modifying one of the complexes.

Treatment.—The treatment of hysteria always requires the removal of the patient from the condition or environment producing the symptom, not necessarily from home, providing the family is intelligent and will cooperate with the physician in charge and protect the patient from suggestion that might intensify the symptom. It is necessary for the physician to stimulate an attitude of confidence in the patient so that he will keep nothing from the doctor.

The fact of releasing one's thoughts will, in itself, usually relieve some or all of the symptoms.

It is upon this well-known fact that the machinery of psychoanalysis is kept in motion.

Releasing the mind of the psychic debris, with quiet pleasant surroundings, good wholesome food, plenty of fresh air, and sunshine, an abundance of water, is, usually, all the treatment necessary.

(Borrowed liberally from Freud and Head.)

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PHYSICAL EXAMINATION OF AVIATION PILOTS

At the last meeting of the American Medical Association, resolutions were adopted, approving the medical work of the Aeronautics Branch of the Department of Commerce. This Department is requiring a careful physical examination of all civil pilots and prospective pilots in the aeroplane service. The physical status of persons who pilot aeroplanes cannot be too closely scrutinized, for the safety of their passengers are entirely within their hands. The resolutions adopted by the American Medical Association were as follows:

Whereas, The Aeronautics Branch, Department of Commerce, has organized a medical service for the physical examinations of civil pilots and prospective pilots, in the interest of safety; and

WHEREAS, The physical standards adopted are in keeping with those adopted universally, and have reduced aircraft accidents from physical causes to a minimum; and

WHEREAS, The department has required these examinations to be made only by designated physicians in the interest of uniformity and control and in accordance with the custom adopted for the Army and Navy and in other countries; and

WHEREAS, The selection of examining physicians by the department has been based on training as flight surgeons or its equivalent, or on group examinations by specialists, a high standard of examination has resulted; and

WHEREAS, The department requires that all examiners hold the degree of Doctor of Medicine, be licensed to practice medicine under the laws of their respective states, and further requires that the appointees be recognized as ethical practitioners in their respective localities, thereby supporting the high standards advocated by this Association, be it

RESOLVED, That the American Medical Association at its stated assembly in 1929 endorses the medical work of the Department of Commerce, its methods of physical examination and its method of selection of medical examiners, and urges that the same high standards be continued and offers the support of the American Medical Association in furthering the specialty of aviation medicine; and be it further

RESOLVED, That a copy of this resolution be sent to the President of the United States, the Secretary of Commerce, and the Secretary of each state medical society.

CURRENT STUDIES ON MALARIA CONTROL MEASURES

An interesting summary of current malaria studies of the Public Health Service with special reference to control measures, has recently been prepared. Reports indicate that during the last three years malaria has increased both in amount and in severity in the Southern States. On the Atlantic seaboard, this increase is limited to the area south of North Carolina and in the Mississippi Valley south of Kentucky. Although the malaria rate has been steadily falling for many years, the reduction in 1925 was not very great and no apparent reduction occurred in 1926. In 1927 there was an upward trend and in 1928 this became very marked. The reporting of malaria is so incomplete and the various measurements of malaria prevalence are so inadequate that only the trend of the disease can be indicated without being able to give exact figures. In areas where malaria is well reported, the reports of physicians show a very large increase in the number of cases; in a number of States the death rates have risen sharply. A few circumscribed epidemics have been reported and investigated in a number of States. Here and there the severer forms of malaria have suddenly appeared. Several deaths from acute malaria have been reported.

During the last two years blood examinations have been made in a number of places. Infection rates varying from a little below 8 per cent to as high as 45 per cent have been found in blood specimens taken in the spring and late fall. One county in a rural section gave a rate of 33 per cent.

Malaria has always been heaviest in rural districts. Most malaria control work, however, has been urban. Heretofore the cost of controlling mosquito production in a town with a population of 1,000 has been about equal to the cost of controlling mosquito production about a single farm house. Rural inhabitants found this too expensive even to contemplate. Research in the field of malaria control has had, as its primary objective, a search for easier and less costly methods.

Recently there have been improvements in the drugs used in the treatment of malaria. However, it is not necessary to wait for the general wholesale use of any drug. Malaria can now be controlled in country districts by other means. Screens have been utilized by the well-to-do for years; but, because of their cost, they have not been put on the poorly-built farm homes or rickety tenant shacks. The problem of screening such homes was attacked by the Public Health Service with gratifying results. The rural screening program developed by the Service is now in effect in five or more States and was used in the post-flood public health work throughout the lower Mississippi Valley.

There is another method of attack against malaria—the prevention of the production of the malaria carrying mosquito by means of Paris green as a larvicide. The Public Health Service has devised an economical method of distributing this dust. An inexpensive gasoline-driven

electric generator was used. This was wired to a light dust gun which, in turn, is connected by a flexible hose to a simple dust hopper. The whole outfit can be carried along with an outboard motor in a light motor car and can be set up by one man in a light row boat. The dust gun creates a cloud of Paris green and hydrated lime, the mixture used having a Paris green content of 15 per cent. The dust drifts in the wind and is known to kill larvae over 600 feet distant. This method has been successfully used with outboard motor speeds of 10 to 15 miles per hour.

One person using the above outfit and a few laborers with hand power knapsack dust guns can prevent the production of mosquitoes from all or nearly all of the producing areas in a county at a cost within the reach of most counties.

The power duster is also in use on lakes impounded for hydroelectric purposes. Most of the ponds were cleared at great cost, leaving only a narrow rim of flotage at the shore line in which Anopheles production occurred. This rim of flotage was removed during the breeding season by lowering the pond level at the commencement of summer, thus stranding the debris and leaving a clean mud bank. However, this fluctuation soon became too wasteful of power and a compressed air-oil-mixture was substituted. Now the power duster still further reduces the cost of shore-line control.

Still further studies to reduce the cost and promote the efficiency of malaria control are being conducted by the Public Health Service.

STATE NEWS ITEMS

On December 19th, the Pinellas County Medical Society held their annual ladies' night at the Yacht Club in St. Petersburg. Dr. H. C. Dozier, president of the Florida Medical Association, was the honored guest of the evening.

* * *

Dr. Wm. H. Moss of Lexington, Va., recently opened offices at 44 N. E. 1st Avenue, Miami.

* * *

The management of the Stephenson Brace and Limb Company requested a statement to be made in this column to the effect that no practicing physicians are financially interested in the Company. There seems to be a misunderstanding on the part of some which the management wishes to correct.

Dr. and Mrs. Louie Limbaugh of Jacksonville announce the arrival of a son born December 28th at the Riverside Hospital. The little boy has been named Miles Mixson.

* * *

Information has just been received that Dr. J. W. Hodges, who retains membership in the Florida Medical Association, has moved from Washington, D. C., to Chicago, where he is connected with the U. S. Veteran's Bureau, 111 N. Canal St.

* * *

Dr. F. G. Renshaw of Pensacola was recently honored by a banquet in celebration of his fifty years in the practice of medicine.

* * *

The many friends of Dr. W. B. Keating, formerly of Key West, now located in Miami, will be interested to learn of his marriage to Mrs. Sue Bradley Douglas of Miami, which took place recently.

* * *

Dr. and Mrs. James B. Parramore of Jacksonville recently returned from a sojourn in Havana, Cuba.

* * *

At the regular meeting of the Pinellas County Medical Society held November 1st, the following program was presented:

"Salpingitis"—T. R. Griffin, St. Petersburg.

"Otitis Media in Children"—N. W. Gable, St. Petersburg.

* * *

Dr. Harold O. Brown announces the opening of offices at 406-8-10 First National Bank Building, Tampa. His practice will be limited to roentgen diagnosis and therapy. Dr. Brown is also continuing his office in Clearwater.

* * *

The State Board of Health approved the negotiations of the State Health Officer with the Rockefeller Foundation by which the services of a highly trained physician was secured as Director of the Bureau of Diagnostic Laboratories. For this position Dr. Paul Eaton was recommended by Dr. W. H. Frost of the Johns Hopkins School of Hygiene and by the Assistant Surgeon General of the U. S. Public Health Service. This appointment will mean a great deal to the medical profession as well as the administration besides being a great relief to the present overworked laboratory staff at headquarters.

THE ORANGE COUNTY MEDICAL SOCIETY NOW HEADS THE HONOR ROLL. THIS IS THE LARGEST COMPONENT SOCIETY OF THE FLORIDA MEDICAL ASSOCIATION HAVING 100% OF DUES PAID FOR 1929.

* * *

Dr. and Mrs. W. Lee Ashton of Umatilla announce the birth of a daughter December 6th, at the Orange General Hospital, Orlando. The little girl has been named Anite Mae.

* * *

Drs. H. A. Day and C. J. Collins of Orlando announce the removal of their offices to Suite 209-212 Exchange Building.

* * *

Dr. Gerry R. Holden of Jacksonville read a paper entitled "The Treatment of Fibroids" at the Sectional meeting of the American College of Surgeons in Atlanta on January 14th.

* * *

Dr. A. C. Hamblin of Tampa has been added to the State Board of Health, Bureau of Communicable Diseases. Because of an urgent request, he has been detailed for a time to work in Gadsden county on hookworm and malaria control.

* * *

The Public Health Institute will be held in Jacksonville Monday, Tuesday and Wednesday, February 10-12, 1930; to be conducted by the National Tuberculosis Association and the Florida Public Health Association in cooperation with the Florida State Board of Health. Philip P. Jacobs, Ph.D., of Columbia University and the National Tuberculosis Association, is in charge of the course which will consist of lectures, discussions and field trips. The Institute is primarily designed for lay persons interested in health work and for professional public health workers interested in the underlying theory and the administrative and educational phases of their work. Tuition for the course will be $5.00. A limited number of scholarships are available. All meetings will be held at the Mayflower Hotel, Jacksonville, Florida. For blanks, information, etc., address 4 East Bay Street, Jacksonville, Florida.

At the annual election of officers of the Hillsboro County Medical Society, Dr. J. Brown Farrior was elected president, Dr. C. A. Andrews, vice-president, Dr. J. T. Cowart, secretary-treasurer, and Drs. E. W. Bitzer and W. J. Lancaster were elected censors. The following members were elected delegates to attend the next annual meeting: Drs. N. L. Spengler, D. D. Martin, W. C. Blake, L. J. Efird, E. H. McRae and G. C. Bottari.

* * *

Dr. B. B. Sory of Lake Worth recently returned from a trip to Cincinnati.

* * *

The annual election of officers of the Pasco-Hernando-Citrus County Medical Society was held December 12th. Dr. T. F. Jackson of Dade City was re-elected president. Dr. A. C. Coogler of Brooksville, vice-president, Dr. P. J. Hudson, Crystal River, vice-president, and Dr. G. R. Creekmore, Brooksville, secretary and treasurer. Drs. J. T. Bradshaw, L. T. Furlow and G. A. Dame were elected censors and Dr. L. T. Furlow, delegate to the next annual meeting of the Florida Medical Association, with Dr. G. A. Dame as alternate. The Society voted to hold its next annual banquet at Hotel Hacienda, New Port Richey.

* * *

Of much interest to our members will be the announcement of the marriage of Miss Clara Johnson to Dr. Thomas Henry Wallis of Ocala. The marriage took place at St. Petersburg December 24th. Dr. and Mrs. Wallis will be at home to their friends after January 1st at 1113 East Ocalawaha Avenue, Ocala.

* * *

Dr. W. E. Burnett, who has been serving for some months as the chief surgeon of the East Coast Hospital, St. Augustine, recently resigned to return to Philadelphia where he will be a faculty member of the Temple University. Dr. Vernon Lockwood of Mansfield, Ohio, will succeed Dr. Burnett.

* * *

At the regular meeting of the Pinellas County Medical Society held November 29th, the following program was given:

"Radiation Therapy in Pelvic Diseases"—O. O. Feaster, M.D., St. Petersburg.

"Diabetic Coma"—Louie Limbaugh, Jacksonville.

Dr. Myron H. Farmer, formerly of Oteen, N. C., has opened offices at 221 Orange Avenue, Daytona Beach.

* * *

A flying medical clinic will take off from Miami, January 24th, for a tour of Central America and South American countries, in the leading cities of which they will hold clinics. The clinic staff will include six physicians of the Pan-American Medical Association, headed by Dr. William Sharpe of New York City. The other five members of the party will include Drs. Geo. W. Hawley of Bridgeport, Conn., Charles M. Grats, Fred H. Albee, and two physicians not yet selected.

* * *

At the annual election of officers of the Columbia County Medical Society, held at the Blanche Hotel, Lake City, December 19th, Dr. L. M. Anderson of Lake City was elected president, succeeding Dr. Herbert Caldwell, Dr. R. B. Harkness, vice-president, Dr. T. H. Bates, secretary-treasurer, and Dr. J. D. Gable was elected delegate to the annual meeting of the Association.

* * *

The following doctors passed the examination of the State Board of Medical Examiners given at Miami November 19th and 20th, 1929, and have been granted licenses:

Amerise, A. Daniel.....Miami
Bailey, Fred W.....St. Louis, Mo.
Billingsley, Gordon D.....Miami
Blackshear, T. E.....Macon, Ga.
Blankenship, Rex.....Tampa
Burke, Allan.....Miami
Day, George H.....Miami
DeVore, Etta Marshall.....Miami
Folsom, Charles Walter.....Miami
Greer, M. N.....Pittsburgh, Pa.
Harrison, Aleck P.....Tallahassee
Hartman, Morris David.....Nashville, Tenn.
Hoffman, Clifford W.....Lake City
Howell, Harrison W.....Miami Beach
Kaufman, Jack J., Jr.....Columbus, Ga.
Ketring, Mary.....St. Petersburg
Laudati, Flaviano S.....Miami
McCrary, Roy Clayton.....Knoxville, Tenn.
McDonald, John J.....Coral Gables
McRae, Alexander J.....Miami
Matthieu, Joseph.....Miami Beach
Mills, Herbert R.....Tampa
Minerdi, Joseph A.....Tampa
Morton, Rosalie S.....Winter Park
Osborne, LeRoy J.....Ormond Beach
Otto, Thomas O.....Coral Gables
Porro, Gustavo.....Tampa
Rogers, Hunter B.....Miami
Sayre, Robert Fawcett.....Jasper
Spicer, Robert Thurston.....Miami
Stokes, Charles Francis.....Miami
Stull, William P.....Jacksonville
Turberville, Joe Ivey.....Tampa
Weinkle, B. O.....Atlanta, Ga.

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Dr. W. B. Keating of Key West has located in Miami.

* * *

Drs. C. E. Tumlin, W. H. Ellis and W. M. Goodson announce the removal of their offices from 203 Townley Building to 315 Olympia Building, Miami.

* * *

The Palm Beach County Medical Society recently held its annual election of officers, which resulted as follows: Dr. V. D. Stone, president, Dr. Lloyd J. Netto, vice-president, Dr. R. Gaylord Lewis, secretary, and Dr. Grace E. Papot, treasurer.

* * *

Dr. and Mrs. M. P. DeBoe of Miami spent the holidays visiting relatives in Key West.

* * *

Dr. and Mrs. W. D. Webb of St. Augustine are located in the Alcazar Hotel for the Winter.

* * *

Dr. Hubert O. Thompson, formerly of Tampa, has recently moved to Tulsa, Oklahoma. His address is 1389 E. 27th St.

* * *

Dr. W. B. Ryan, Jr., of Columbus, Ohio, recently opened offices in the Huntington Building, Miami.

* * *

In the future, the State Board of Health is considering free antirabic treatments, in which case no treatment will be sent unless the name, age, and sex of the patient is given by the attending physician, when treatment is ordered. For more details see the February issue of the Florida Health Notes.

* * *

To get the real facts on this important subject, do not fail to look for the special color supplement in the Journal of the American Medical Association for January 18. In the meantime, please see the Mead Johnson announcement in this issue also, entitled "The True Story of Acterol."

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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

MODERN plans for curbing the spread of tuberculosis consist of a combination of medical and social measures, which aim (a) to prevent infection and (b) to inhibit the development of actual disease, once infection has taken place. The techniques employed for achieving these aims vary in actual practice according to the viewpoints of the several workers and the peculiar situations of their communities. W. Bolton Tomson, M.D., in a recent book, "Some Methods for the Prevention of Tuberculosis," describes



In the United States, preventoria provide protection for tuberculous children.

several outstanding measures employed in European countries, which illustrate various emphases on details of method.

FRANCE

Professor Grancher realized the possibilities of separating the newborn from its tuberculous mother, and, as the result of his labor, the *Œuvre Grancher*, a society for protecting children against tuberculosis, was established in 1903 and received governmental endorsement two years later. It arranges "for children from three to ten years of age who are not infectious to be placed out in country districts, where they are educated and stay until they are thirteen years of age." Over 2,500 children have been cared for, and during a period of over 17 years only 7 cases of tuberculosis were registered. The average cost per child is about one-sixth the cost of healing a tuberculosis patient in a sanatorium.

Another society, the *Placement Familial des Tout-Petits*, deals with children from birth. The

(*Continued on page 326*)



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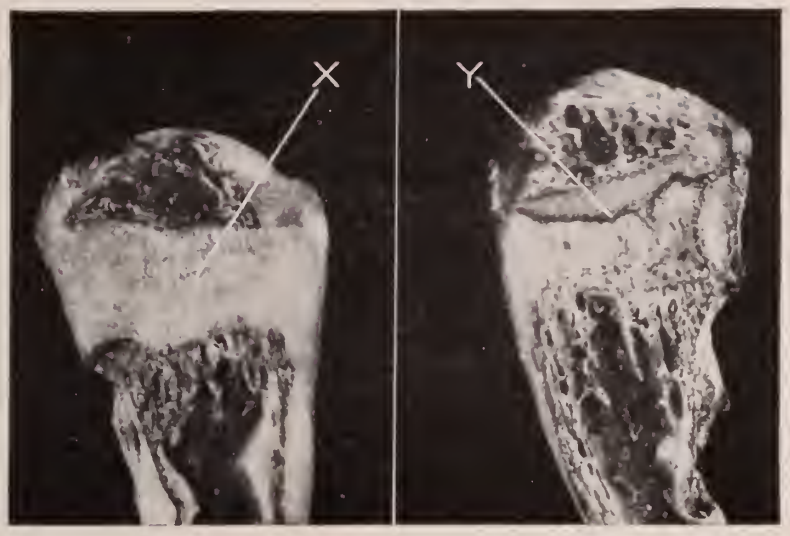
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newborn baby is isolated temporarily in a *creche,* or baby ward, for observation, then cared for at a Maternity Clinic for about three years, after which he is boarded out in a peasant family free from tuberculosis. Separation between mother and child is complete, excepting in rare instances where breast feeding seems essential. The mother is induced to give up her baby by kindly persuasion, but the surrender must be complete for a period of not less than two years. Parents may make four visits to the child during the year. The foster parents are supplied with the infant's clothing, a cradle and a perambulator. They are bound by definite rules to care for the child as specified by the association and to bring the child periodically to the Centre for observation. The 1927 report of this society states that of the 434 children dealt with, there were 19 deaths, only one of which was due to tuberculosis.

BELGIUM

The Belgian National League against Tuberculosis operates on principles similar to those employed in France. It receives financial aid from the government, municipalities, private donations, fetes, etc., and allots grants to its several branches on a per day, per child scale. Out of 3,000 children dealt with, only one has died from tuberculosis. As in France, many of the children placed in foster homes decided to remain in the locality of their adoption on reaching maturity.

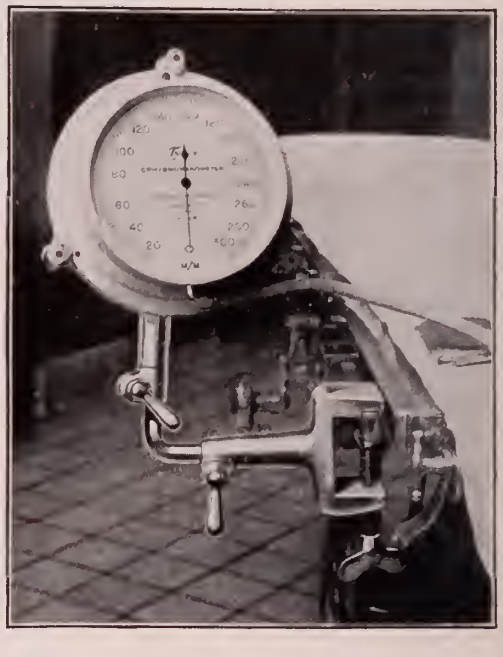
SWITZERLAND

In Switzerland, the emphasis is on sanatoria and on preventoria. A federal subsidy helps to finance the plan of placing children in preventoria, and allotments are made to the institutions on a per child, per day basis. The results appear to be not so glowing as those reported from France and Belgium. For example, a study was made (terminating in 1923) of 323 patients from 3 to 25 years of age who had been inmates of the Sanatorium de Wald at Zurich:

Of 195 cases of mild severity, 8.7% had died.
Of 31 cases of medium severity, 42.0% had died.
Of 97 cases with severe lesions, 85.5% had died.

Deep-rooted tradition, misplaced parental affection, and the absence of compulsory laws are said to make it difficult to secure proper care for children of tuberculosis parents before it is too late. Recently, however, most people are realiz-

(*Continued on page* 328)



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ing the significance of Grancher's principle, and the demand for preventorium care is rapidly increasing.

NORWAY

A Tuberculosis Act, passed in 1900, makes the notification of all cases compulsory. The doctor in charge is obligated to instruct the patient and to enforce the recommended precautions. If the patient is recalcitrant, he may be sent to a "Home for Consumptives," which is done particularly in cases where children are endangered, though the law does not yet permit the forcible separation of husband from wife. Each town and parish has its Tuberculosis Committee, responsible to a Central Tuberculosis Committee for the whole kingdom. Poor children of tuberculous parents are also placed in homes and institutions, in which case two-fifths of the cost is borne by the state, while the county and town in which they live bear the remainder. When the Tuberculosis Act was first enacted, no institution existed for isolating adult cases. The Norwegian Women's Health Association then collected funds and established, in 1903, a "Nursing Home for Tuberculosis" near Oslo, which has been followed by the establishment of 100 similar homes with a total of about 2,000 beds. Also, a special Home was opened for infants of tuberculous families, many of whom are received at birth. This is, in effect, the Grancher system, except that children are institutionalized instead of placed in private homes. Other devices, such as open air schools as we know them, are also in use. At present, an effort is being made to improve housing conditions for, as the author says, the infection may be *minimized by dilution* to those who live in daily contact with an infecting agent.

SWEDEN

The system in Sweden is essentially like that of Norway. An excellent demonstration was recently completed. It began in 1904 in a poor district of medium size, situated in a remote spot inhabited by a comparatively stationary population and infested with tuberculosis. Surrounding districts of similar type served as controls. The demonstration centered around a building serving as general headquarters, as well as a Cottage Hospital and Children's Home. In the twenty years' period, tuberculosis morbidity was reduced 33% and the mortality 28%, whereas practically no

(*Continued on page 330*)



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reductions were noted in morbidity or mortality in the control areas.

ENGLAND

In England, prominence is given to the view that infection may be prevented from developing into serious disease by raising the bodily resistance and by diminishing the strength or sizes of



Model cottages occupied by ex-patients employed by Papworth Industries.

the infecting doses. Tuberculosis Village Settlements, such as Papworth at Cambridgeshire and Preston Hall at Aylesford, have demonstrated the feasibility of the idea. Papworth, established in 1916, is a colony or village settlement for tuberculous cases in the arrested or quiescent stage. The underlying idea is voluntary segregation. Training in some trade or craft is given while the colonist is under treatment or medical observation. Remunerative employment is offered, which enables the colonist to earn part of his income, the remainder being provided by the state as a subsidy. The colony provides at all times medical supervision and hospital facilities. Some of the colonists settle down with their families and remain for life. Thus, such a scheme provides medical care, remunerative occupation, and an optimistic atmosphere; the entire family may be supervised and the general public is protected.

In all countries, of course, general measures, such as education of the public, sanitary regulations, the encouragement of better living standards, etc., are not neglected. In the United States, the drastic method of separating children from their families is not acceptable, the development of colonies is in its infancy, and mandatory laws are not popular.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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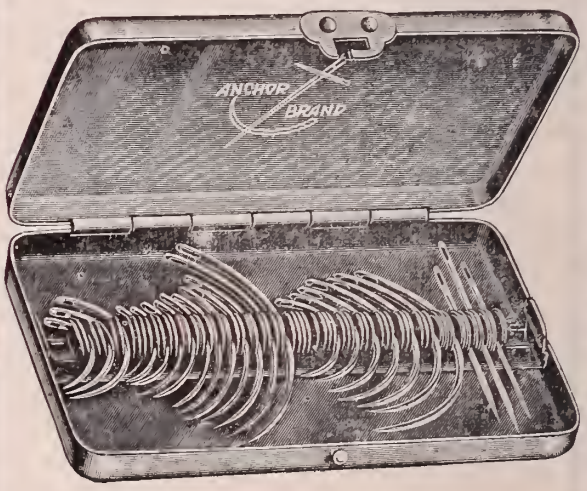
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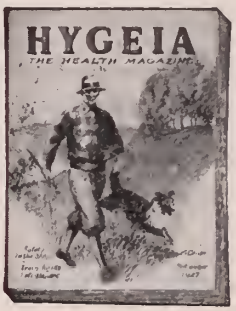


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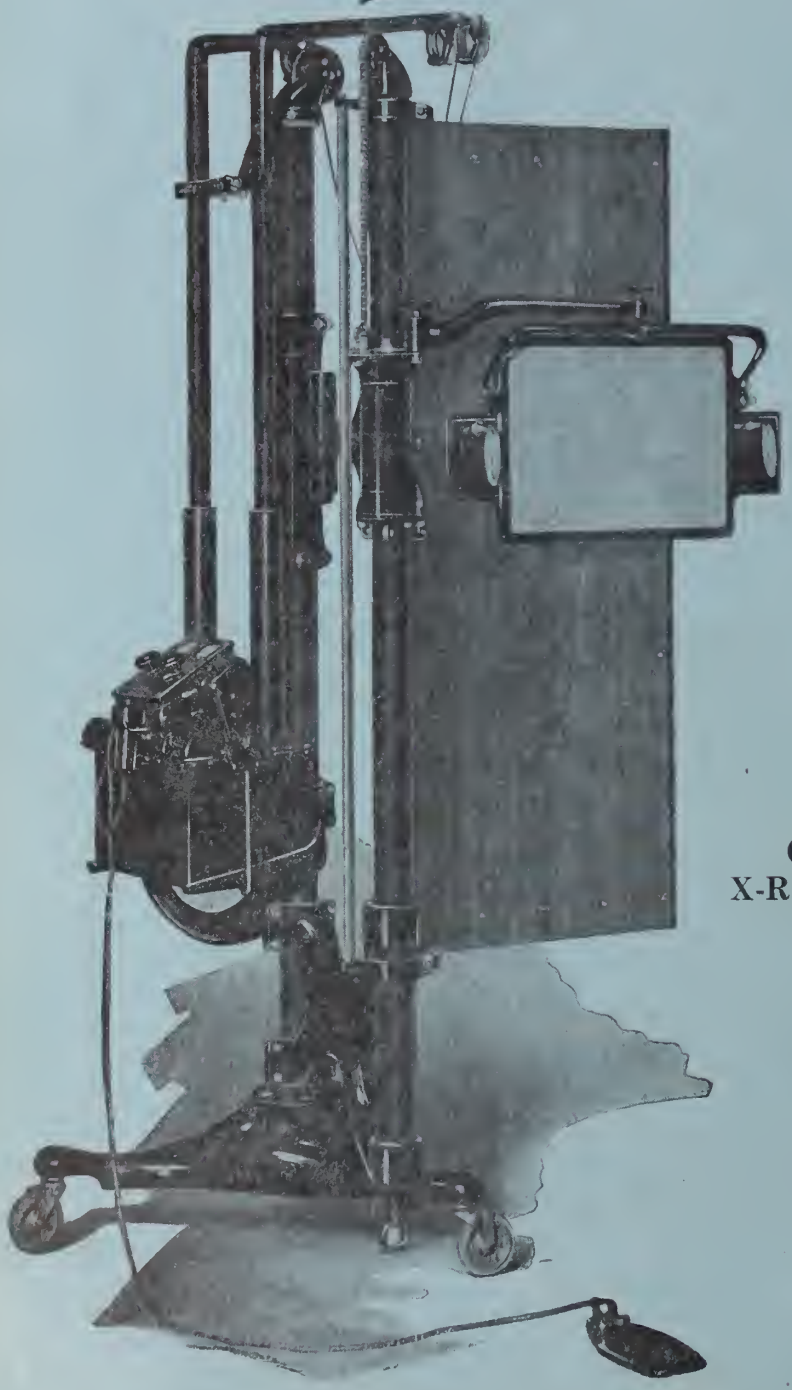
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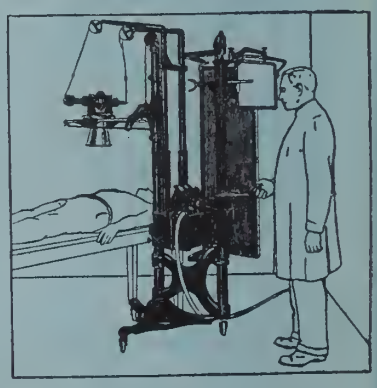
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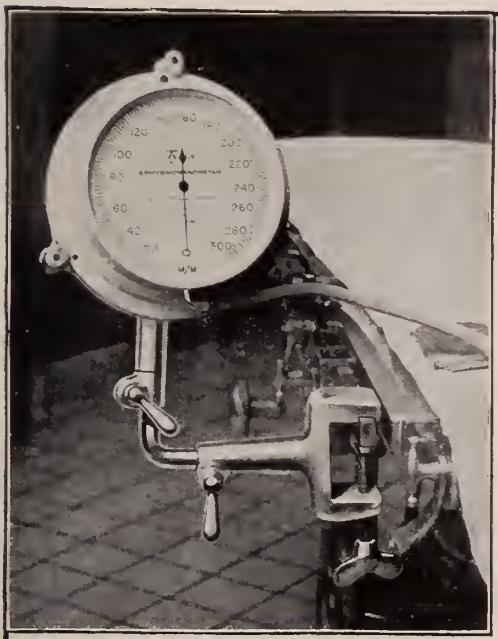
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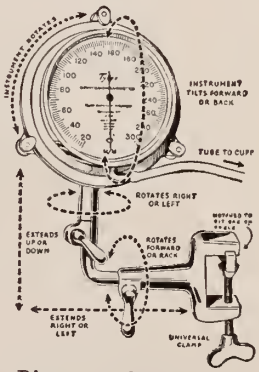


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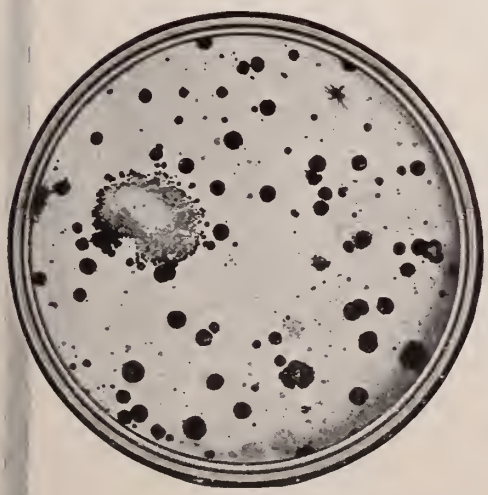
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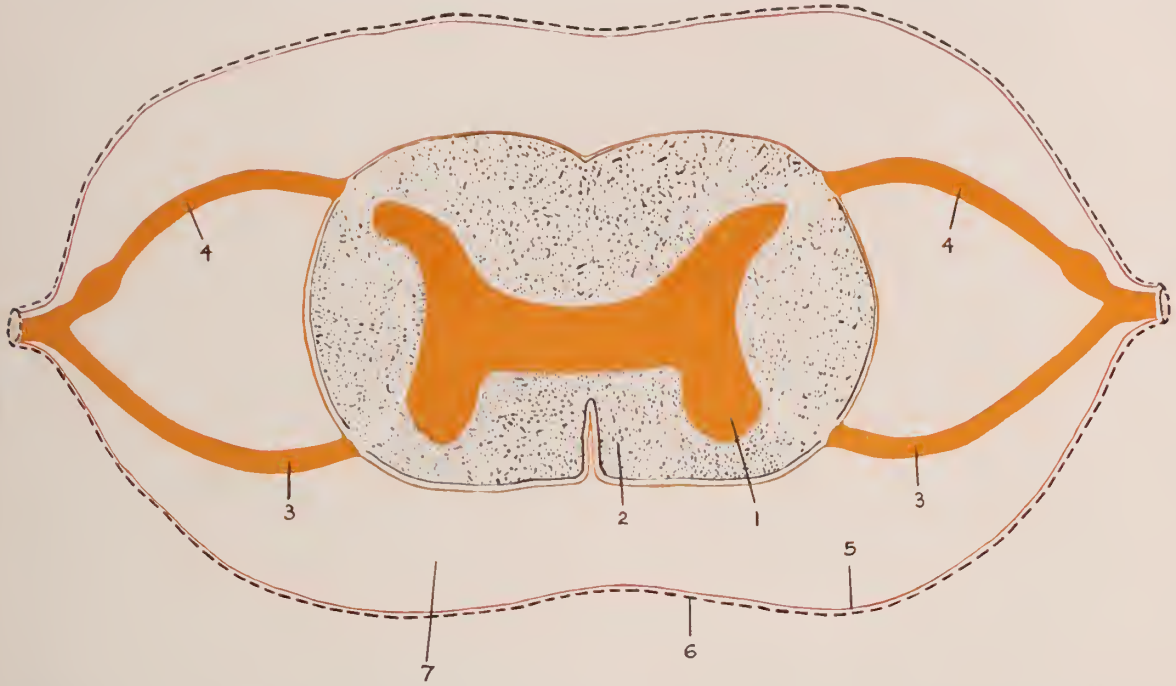


FIGURE 1-A. This diagram represents a spinal cord segment. (1) Grey substance. (2) White substance. (3) Anterior nerve roots. (4) Posterior nerve roots. (5) Spinal arachnoid. (6) Dura mater. (7) Subarachnoid space.

THE PHYSIOLOGY OF SPINAL ANESTHESIA*

JAMES M. BRYANT, M.D.,
Jacksonville.

Since the advent of surgery on the human body there has always existed a fundamental law between the patient and the surgeon; namely, that it is the first duty of the surgeon to avail himself of every possible means within his power to preserve the life of the patient. If one is conscientious he does not hesitate to ask for consultation if he feels that his professional skill is wanting along some particular line, or if the patient's condition approaches the critical state. The conscientious surgeon also takes considerable care in the preoperative preparation of his patient. He demands a well-equipped operating room and insists that the assistants be well trained in sterile technique. But what consideration is given to the anesthetic? Ordinarily, a general anesthetic is chosen and left in the hands of the anesthetist with results usually being in a direct ratio to the latter's experience and ability. Not infrequently the anesthetic is left to one who is untrained and inexperienced, with the result that anesthetic morbidity and mortality are increased.

There is some little something missing in every good surgeon if he is not a good general anesthetist himself. He should know how to administer every acceptable method of anesthesia, and should know indications and contraindications of each, so that he may be able to choose for his patient the one offering the best chances of operative recovery in the shortest possible time. Not infrequently a patient suffers a more stormy convalescence from an ill-chosen general anesthetic than he does from the operation for which it was given.

To administer inhalation anesthesia to patients suffering with eclampsia or pernicious vomiting, bronchitis, pleurisy, pulmonary tuberculosis, diabetes, nephritis, alcoholism, pharyngeal or tracheal obstruction, acute coryza, influenza or post-influenzal convalescence, general peritonitis, intussusception, volvulous, strangulated hernia, prostatic disease, localized or pelvic peritonitis,

*Read before the Duval County Medical Society, Jacksonville, November 5, 1929.

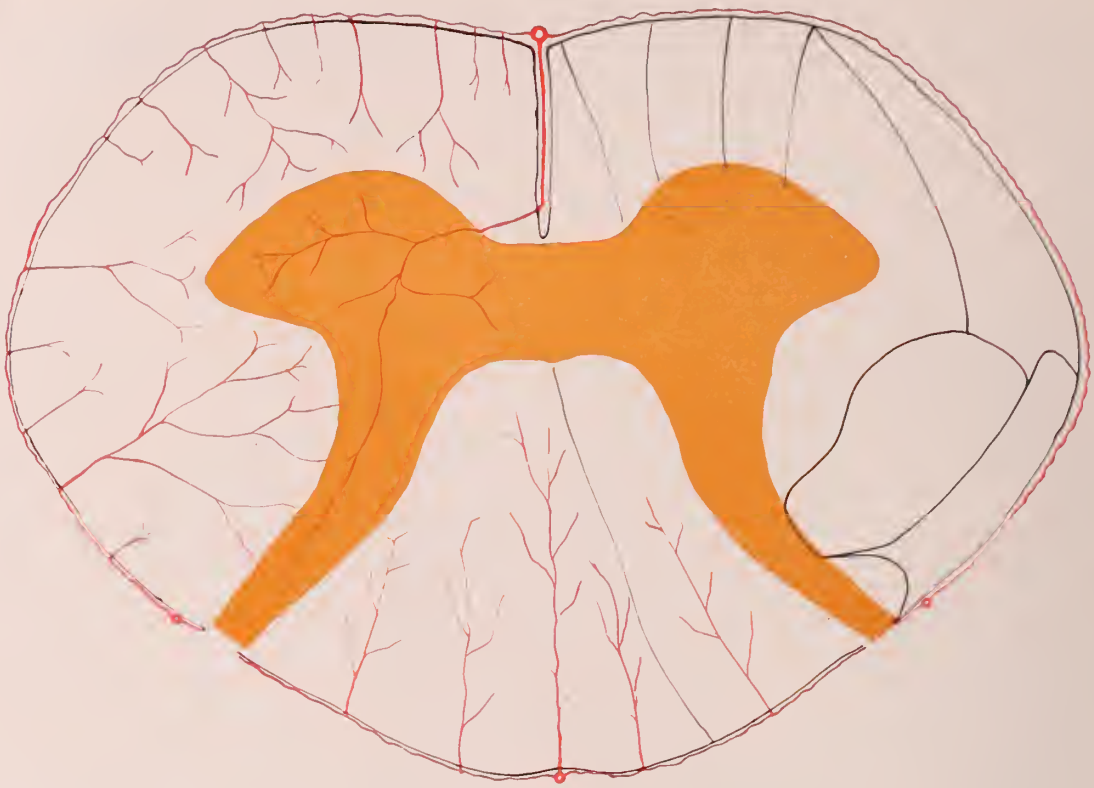


FIGURE 1-B. This diagram represents a cross section of the spinal cord showing its arterial network.

decompensated heart, hypertension, arteriosclerosis, extreme emaciation or obesity, one fails to adhere to the aforementioned fundamental law, and is, without doubt doing injustice to the patient by contributing directly to anesthetic—and indirectly to surgical,—morbidity and mortality. All of the above types of cases react much more favorably to spinal anesthesia. In fact, the majority of patients whose operation is to be below the diaphragm, whether inhalation anesthesia is contraindicated or not, do exceedingly well with spinal. It is the anesthetic of choice with the majority of surgeons who have made a special study of this method, who have acquired a fair knowledge of its physiological principles, and who have developed an accurate technique of induction.

The fact remains, however, that there is some opposition to, or rather fear of, spinal anesthesia among many surgeons who are unfamiliar with its use. This fear is apparently well founded on the part of one who does not know of the various physiological phenomena incident to this method, and who does not know why and how such phenomena occur. This fear, instead of being a drawback, serves a good purpose in that it tends to restrict the promiscuous and indiscriminate use of spinal anesthesia and thereby plays a great part in keeping a safe and valuable method from again falling into disrepute.

For one who thoroughly understands its physiological principles, spinal anesthesia holds no fears, therefore my remarks at this time will be limited strictly to the physiological phenomena which accompany this method.

In order to present a clear mental picture of these phenomena it will be necessary to review very briefly the anatomy of that portion of the central and autonomic nervous systems leading up to the physiology involved.

Grossly the medulla spinalis, or spinal cord, extends from the upper border of the atlas above to the second lumbar vertebra below (the third lumbar in children). It consists of the gray substance surrounded by the more resistent and less permeable white substance. The gray substance contains two anterior and two posterior horns, or columns, from which arise the ventral and dorsal roots of the spinal nerves. The white substance contains many tracts and funiculi, but as they are not directly involved in spinal anesthesia their division and description will not be given.

Though there are no visible external markings, the spinal cord anatomically is divided into eight cervical, twelve thoracic, five lumbar and five sacral spinal segments. A segment embraces that portion of the cord giving origin to one pair of spinal nerves (Fig. 1-A).

Two very tough membranes, the glial sheath and pia mater, snugly surround the entire spinal cord. This covering is important in that it tends to prevent absorption by the cord substance of any injected drug, and that it carries the main arterial supply to the cord itself. One must visualize this arterial network when doing a spinal puncture, for any reason, above the second lumbar vertebra (third lumbar in children, Fig. 1-B).

The spinal arachnoid, the third covering of the spinal cord, is a thin, delicate and tubular membrane loosely investing the cord. It contains neither vessels nor nerves, and is separated from the pia mater by a comparatively wide space, the subarachnoid space, so commonly referred to as the spinal canal (Fig. 1-A). This space is of tremendous importance in spinal anesthesia. It contains the circulating spinal fluid, the unsheathed spinal nerve roots, ligaments, bloodvessels and lymphatics, and is the receptacle into which the anesthetic drug must be deposited. The subarachnoid space is divided into an anterior and posterior chamber by the two ligamentia denticulata. These ligaments are distinct fiberous bands extending throughout the entire length of the spinal cord, separating the anterior and the posterior spinal nerve roots. While the median borders of these ligaments are continuous with the pia mater at the side of the spinal cord, their lateral border presents triangular tooth-like processes, the points of which are fixed at intervals to the arachnoid and dura mater, providing a certain amount of communication between the two chambers (Fig. 2).

There are two other but less well-defined ligaments of the spinal cord, the linea splendens in front and the septum posticum behind. These ligaments are cribiform reflections of the pia mater, their development varying in different individuals, and are, as a rule, much more distinct in the lower than in the upper portion of the cord. The spinal cord ligaments are important in that they sometimes influence an unequal diffusion of the anesthetic drug which may result in a more pronounced anesthesia on one side than on the other. If the anesthetic solution should diffuse mostly in the posterior chamber, which contains the posterior or sensory nerve roots, its anesthesia would very likely be complete while motor function, which is invested in the anterior nerve roots, would remain in evidence. Not infrequent-

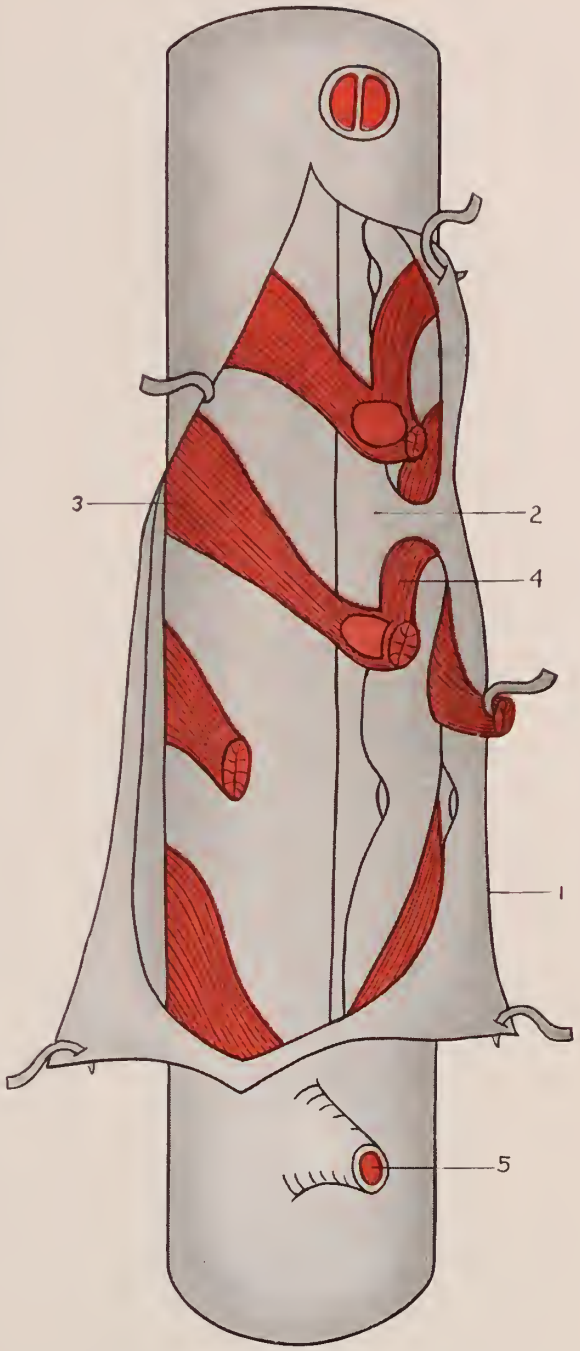


FIGURE 2. Diagramatic representation of a section of the spinal cord and dura mater showing the (1) dura opened; (2) ligamentum denticulatum; (3) posterior and (4) anterior spinal nerve roots; (5) a spinal nerve after the two roots have united and taken on the dura as its sheath (epineurium). (Grey's Anatomy).

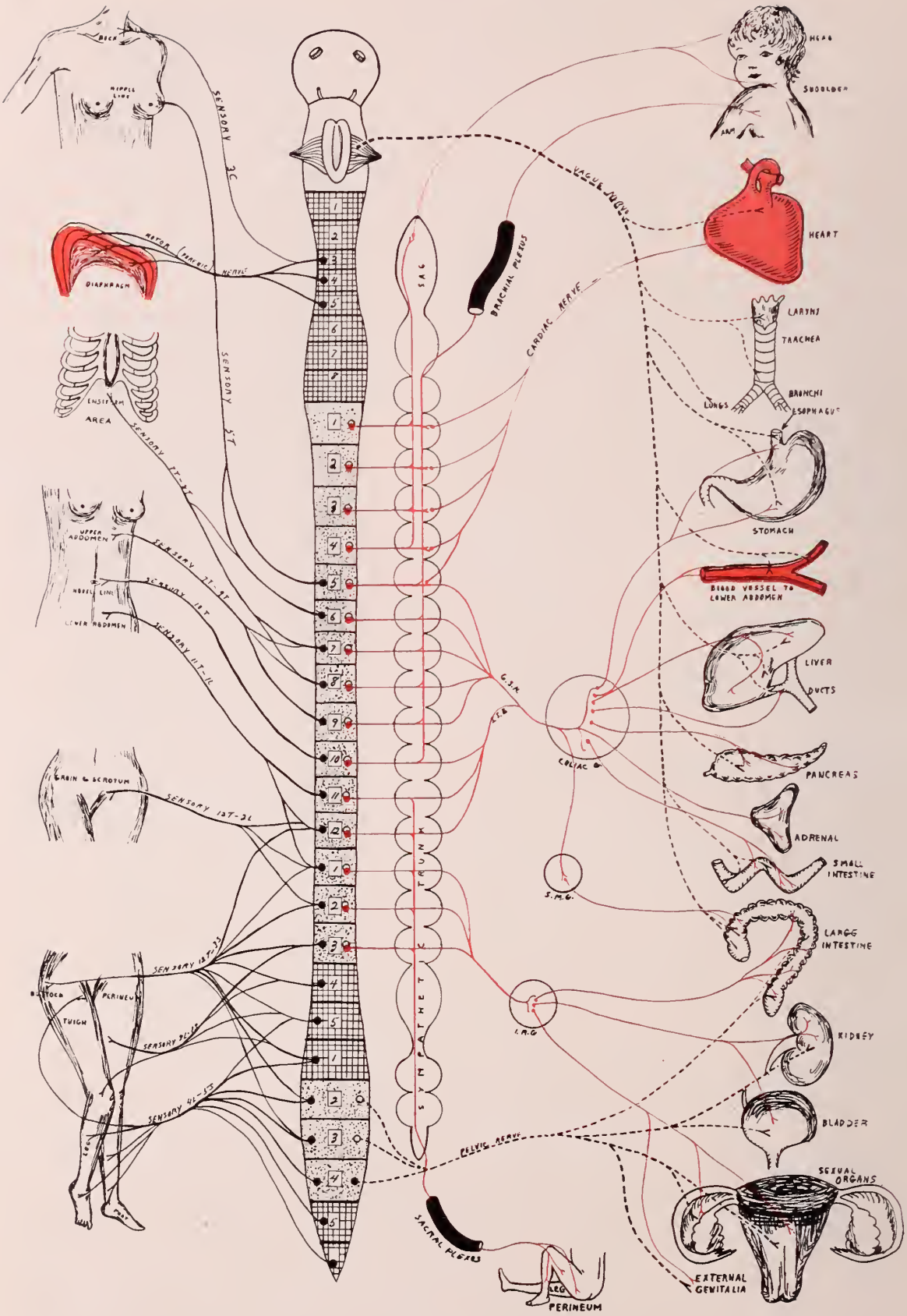


FIGURE 4. Diagramatic illustration of that portion of the central, sympathetic and parasympathetic nervous system involved in spinal anesthesia (modified from Evan's Spinal Anesthesia).

ly good anesthesia is obtained in a patient who at the same time is able to move his feet and legs. Also if the bevel of the spinal puncture needle happens to be against one of these ligaments the free flow of spinal fluid may be interfered with and aspiration of the fluid be prevented.

The spinal dura mater is the fourth and most important of the coverings of the cord. Comparatively it is a thick and tough membrane which must be punctured at some point before spinal anesthesia can be induced. The spinal dura is continuous above with that of the brain and extends as far downward as the second sacral vertebra. Spinal puncture is almost always done in the lumbar region and although the dura is larger here than elsewhere it contains the cauda equina and every effort must be used to avoid injury to this important nerve structure. On each side of the dura are the double openings which transmit the two roots of the corresponding spinal nerves, the dura being continued in the form of tubular prolongations around them as they pass through the intervertebral foramina (Fig. 2). The dura is separated from the bony wall of the vertebral canal by the epidural space which contains fat, a quantity of loose areolar tissue and a plexus of veins. It is important to visualize the epidural space in doing spinal puncture for any reason. One should be able to differentiate the loss of needle resistance in this space from that in the subarachnoid space so that the stylet of the needle will not be removed until the latter's bevel has entered the subarachnoid space.

There are thirty-one pairs of nerves which spring from the spinal cord, each nerve being firmly attached to the cord by an anterior motor and a posterior sensory root, the latter always being distinguished by its ganglion. After the two roots unite each spinal nerve takes on its sheath, the epineurium, and makes its exit through its own intervertebral foramen.

The autonomic nervous system, which is both extensive and complex, consists of three principal divisions, commonly known as the sympathetic, parasympathetic and enteric nervous systems. The latter comprises that system of nerves forming the plexuses of Auerbach and Meissener in the walls of the stomach and small intestine. Very little is known regarding either the anatomical connection with the central nervous system or the peculiarities of their functional activity, and they are, therefore, of no known importance in so far as spinal anesthesia is concerned.

The two main divisions, however, the sympathetic and parasympathetic have definite connections with the central nervous system and their anatomical distribution, physiological function, and pharmacological reactions are quite well understood.

The sympathetic autonomic system has its connection with the central nervous system through small communicating branches, the rami communicantes. Sympathetic autonomic nerve fibers are known to emerge from the spinal cord in the anterior roots of the spinal nerves from the first thoracic to the third or fourth lumbar. These fibers pass by way of the rami communicantes to the chain of sympathetic ganglia and thence to all regions of the human body (Fig. 4).

All sympathetic autonomic fibers going into the sympathetic ganglia are termed pre-ganglionic fibers or white rami. The white rami contain the vasomotor fibers that go to make up the innervation of the entire vascular system. The vasomotor fibers that are destined to supply the peripheral blood-vessels leave the sympathetic ganglia now as post-ganglionic fibers or gray rami, return through the rami communicantes to the spinal nerves and are then distributed to their respective regions (Fig. 5). On the other hand the vasomotor fibers destined to supply the great vascular regions of the intestine and other abdominal viscera leave the sympathetic ganglia, still as pre-ganglionic fibers, in the branches of the splanchnic nerves and through them pass to the celiac and superior mesenteric ganglia where they mainly terminate, their paths being continued by post-ganglionic fibers arising from these ganglia (Fig. 6).

The sympathetic autonomic system also supplies the heart with its accelerator nerve fibers. These fibers emerge from the spinal cord in the anterior roots of the second, third, fourth, fifth and sometimes the sixth thoracic spinal nerves, pass to the stellate or first thoracic and inferior cervical ganglia, thence to the heart through the cardiac plexus (Fig. 7).

The para-sympathetic autonomic nervous system is connected with the central nervous system at its two ends, with the brain above through the tenth cranial or vagus nerve, and with the sacral segments of the spinal cord below through the nervous erigens or pelvic nerve (Fig. 4). The vagus being a very extensive and complex nerve, only such portions of it as play a part in the various phenomena incident to spinal anesthesia

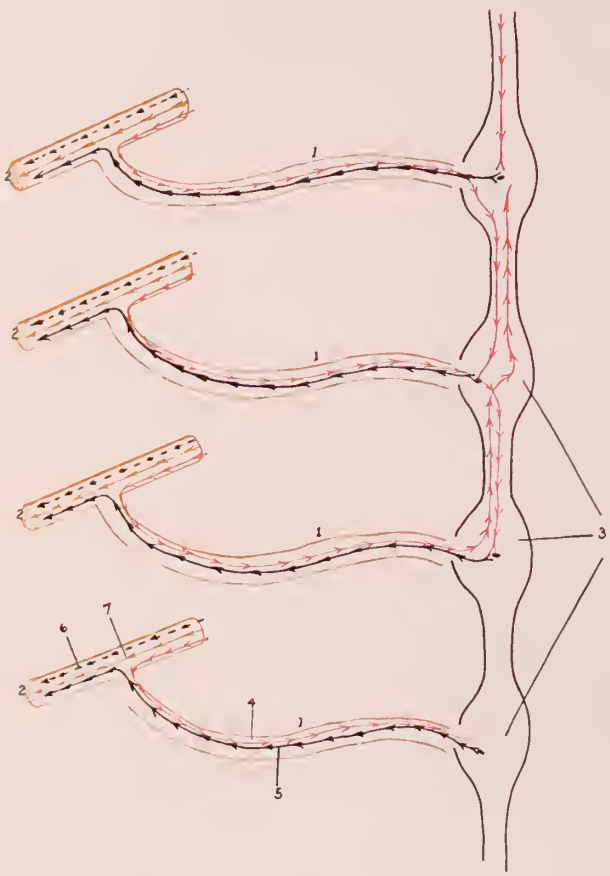


FIGURE 5. Diagramatic representation of the rami communicantes connecting the central nervous system with the sympathetic nervous system. (1) Ramus communicans. (2) Spinal nerve. (3) Sympathetic ganglia. (4) Preganglionic fibers. (5) Post-ganglionic fibers. (6) Motor fibers. (7) Sensory fibers.

will be considered. It takes its origin in the medulla oblongata and passes downward through the neck and thorax, and ends in the abdominal cavity. In the neck the vagus gives off the superior, middle and inferior cardiac branches. These branches, containing inhibitory fibers for the heart, enter into the formation of the anterior and posterior cardiac plexuses (Fig. 7).

In the thorax the vagus nerve gives off two or more pulmonary branches. These branches, containing motor and sensory fibers for the bronchi and lungs, enter into the formation of the anterior and posterior pulmonary plexuses. In the abdomen the vagus terminates in the celiac plexus from which it sends motor fibers to the stomach, small intestine, cecum and ascending colon (Fig. 6).

As stated above, the parasympathetic system is also connected with the central nervous system at the lower end of the spinal cord through the pelvic nerve. This nerve gets its origin from the second, third and fourth sacral segments and independent of the sympathetic ganglia it passes directly to and takes part in the formation of the pelvic plexus. The pelvic nerve supplies motor fibers to the colon, sigmoid, rectum and anus (Fig. 4).

DIFFUSION OF THE ANESTHETIC DRUG

The success of spinal anesthesia depends largely upon the fact that the extent and duration of anesthesia can usually be adjusted to accomodate the needs of the various surgical procedures. This anesthesia is obtained by blocking the posterior sensory roots of the spinal nerves. Therefore to obtain the necessary anesthesia one must cause the anesthetic drug to diffuse in the subarachnoid space sufficiently high and in sufficient concentration to block the corresponding nerve roots. There is a selective affinity between these unsheathed sensory nerve roots and the anesthetic drugs of the novocain group, and when such a drug is introduced into the subarachnoid space there is diffusion both toward the head and towards the sacrum regardless of the position of the patient. The nerve roots become highly saturated and there is a rapid fixation of the anesthetic drug by the lipoids of the nerve tissue. This action is greatest at the point of first contact and unless special factors are brought into play, diffusion of the anesthetic drug will tend to be small and anesthesia will be limited.

Increased diffusion, giving a higher level of anesthesia, can be produced when the spinal fluid pressure is reduced by withdrawing a greater quantity of the fluid. If the spinal fluid pressure is greater than normal at the time of injection of the anesthetic drug, all other factors being equal, the diffusion of the drug will be appreciably decreased. On the other hand, if a sufficient quantity of spinal fluid is withdrawn to greatly lower its pressure immediately before the injection of the drug, the extent of diffusion will be appreciably increased.

A part or all of the withdrawn spinal fluid is used for the solvent of the anesthetic drug, nothing else being added. The amount of the drug used and the force used in reinjecting the solution also plays a part in the extent of diffusion. The combination of lowering the spinal fluid pressure, increasing the size dose of the drug used, using the fluid for the solvent agent, and force used in the injection are the most powerful factors we

have at hand in producing the greatest amount of diffusion and the highest level of anesthesia. Withdrawal of only a c.c. or two of fluid, the use of a small dose of the drug, and a very slow reinjection will give low anesthesia of short duration. By withdrawing a large quantity of fluid with lowering of the spinal fluid pressure, employing a maximum dose of the drug, and a rapid and forceful injection, one can produce anesthesia even as high as the scalp.

Position of the patient seems to have but little, if any, influence on the extent or direction of the diffusion. To lower the head of the patient does not seem to increase the diffusion in that direction even the slightest and I believe one is very likely to invite disappointment if he depends on the position of the patient to provide any increase in directional diffusion. It is true that when novocain is dissolved in spinal fluid, to which nothing else is added, the specific gravity of the solution will be slightly increased but, practically, this increase becomes negligible as the solution is mixed with the spinal fluid in the subarachnoid space. Furthermore, the nerve roots absorb the anesthetic drug almost the instant the two come in contact with each other, and it is a matter of only a few minutes until none of the drug remains in the fluid. Thereafter the position of the patient means nothing insofar as diffusion of the drug is concerned.

The Drop in Blood Pressure

It is common knowledge among the profession that spinal anesthesia produces a sudden and considerable drop in blood pressure. It is this drop that carries with it actual fear in those who are not wholly familiar with the physiology of such a sudden lowering of the blood pressure and who are uncertain as to the management of a patient through this short period of sudden circulatory disturbance.

Normal blood pressure is maintained largely by the action of the vasoconstrictor nerve fibers which keep the blood vessels in constant tonic activity. These vasoconstrictor fibers emerge from the spinal cord in the anterior roots of the spinal nerves from the second thoracic to the second or third lumbar. If these fibers are cut, or if they are blocked with an anesthetic drug, the drop in blood pressure will reach its maximum. But in ordinary spinal anesthesia the anesthetic drug does not diffuse high enough nor in sufficient concentration to block the nerves as high as the second thoracic. However, in the majority of cases the drug will diffuse high enough to block a part or all of the vasoconstrictor fibers leading to the great vascular regions of the intestine and other abdominal viscera. These vasoconstrictor fibers emerge from the spinal cord in the anterior roots of the spinal nerves from the sixth thoracic to the first lumbar, pass by way of the corresponding sympathetic ganglia into the greater and lesser splanchnic nerves, thence to the celiac and superior mesenteric plexuses. If these splanchnic nerves are severed the blood vessels of the splanchnic area lose their tone and dilate, pooling the blood from other parts of the body with the result that peripheral arterial blood pressure drops to a very low level.

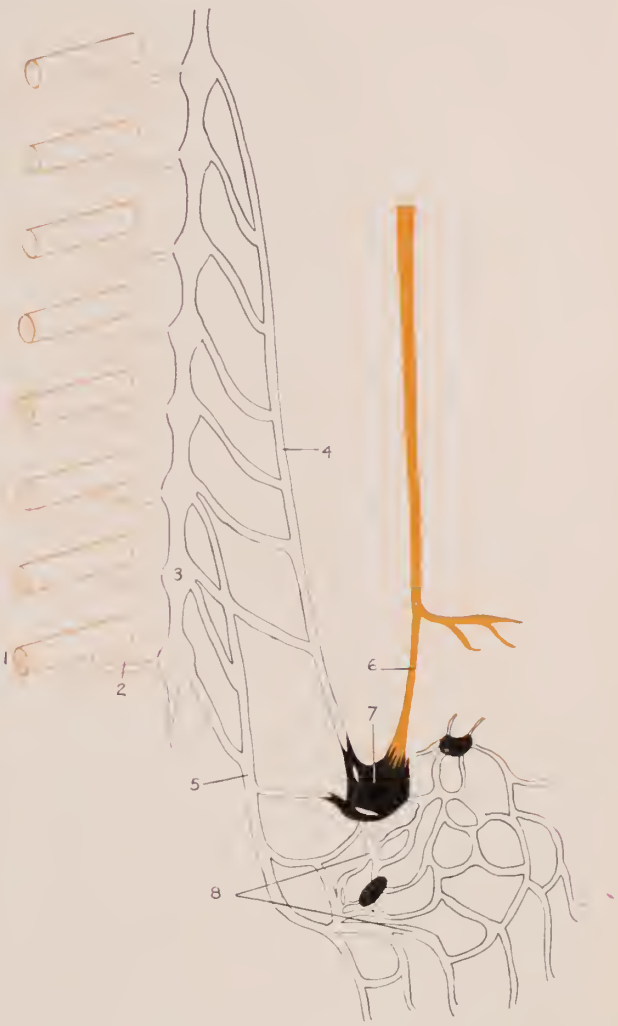


Figure 6. Illustrates the formation of the greater and lesser splanchnic nerves by small branches arising from the sympathetic ganglia. (1) Spinal nerve. (2) Ramus communicans. (3) Sympathetic ganglia. (4) Greater splanchnic nerve. (5) Lesser splanchnic nerve. (6) Vagus nerve. (7) Celiac ganglion. (8) Celiac plexus.

This proves conclusively that the constant tone of the blood vessels in the splanchnic area alone plays a predominant part in the maintenance of normal blood pressure. Therefore, if the anesthetic drug diffuses up to the sixth thoracic spinal nerves in sufficient concentration to block all the vasoconstrictor fibers up to that point, the splanchnic blood vessels lose their tone and dilate with the result that peripheral arterial pressure drops in the same manner as if the splanchnic nerves were severed.



FIGURE 7. This drawing illustrates the formation of the cardiac plexus. (1) Spinal nerve. (2) Ramus communicans. (3) Sympathetic ganglion. (4) Stellate ganglion. (5) Superior middle and inferior cervical ganglia. (6) Vagus nerve with its three cardiac branches.

The drop in blood pressure will vary from 10 m.m. hydrg. to 70 m.m. hydrg., depending on the extent of diffusion of the anesthetic drug and the proportion of vasoconstrictor fibers involved. Occasionally the drop in blood pressure will be so great that an accurate reading can not be made and the radial pulse may become imperceptible. Ordinarily the gravity of such a situation would seem alarming, but it is only apparently so in spinal anesthesia, for the patient can be made quite safe if he is not mismanaged or overmanaged.

One must always remember that in spinal anesthesia with the splanchnic blood vessels toneless and dilated, the circulatory disturbance becomes a question of gravitation of the blood to the dependent portions of the body. Consequently some of the peripheral arteries, particularly those in less dependent portions of the body, become impoverished. Therefore the brain which contains the cardiac and respiratory centers must be made a dependent portion so that it will not be drained of its blood, and a fatal cerebral anemia allowed to occur. This can best be done by placing the patient in a slight Trendelenberg position. No one can foretell how much drop in blood pressure a patient is going to have, and remembering that in the arterial system of the brain the ganglionic system and the long branches of the cortical system are terminal arteries, the brain should be made a dependent portion before any drop in blood pressure occurs, for the simple reason that these terminal arteries neither give off nor receive anastomotic branches; their walls are not supported by muscle tissue or aponeurosis and contain no elastic or contractile fibers. When these vessels become impoverished they collapse and once collapsed they usually remain so and the patient's life is endangered. So one should not make the serious mistake of waiting to see if the patient is going to have a sufficient drop in blood-pressure before placing him in a slight Trendelenberg position. The latter should be done within a few minutes after the anesthetic drug has been injected.

When death, due strictly to the anesthesia method, occurs in spinal anesthesia cases, it is not due to the toxic effect of an average dose of the anesthetic drug, nor is it due to paralysis by high diffusion of the latter, a common and erroneous belief. Death in such cases is due to cerebral anemia.

The Heart

While I have stressed the importance of constant tonic activity of the blood vessels in maintaining normal blood pressure, the power of keeping up this pressure is invested in the heart, and if blood pressure is to be maintained within normal limits, even under ordinary conditions, there must be a certain amount of cooperation between the blood-vessel tone and the tonicity of the heart. Everyone is familiar with the clinical picture of a slowed heart-rate following the rise in blood pressure to a high level. Under such

conditions a slowing down of the rate tends to keep the pressure down and save the heart from overwork. Everyone is likewise familiar with the well-known acceleration in the heart-rate that follows when blood pressure drops to a low level. Such a picture is always seen during shock or following severe hemorrhage. This acceleration is an effort on the part of the heart to raise blood pressure back to normal.

In order that the heart may be kept in a more powerful and constant tonic activity, and in order that it may respond more quickly and smoothly to whatever demands are made upon it by variations in blood pressure, nature has placed this organ under two separate and distinct motor influences; namely, the inhibitory innervation and the accelerator innervation. You will recall that the inhibitory nerve fibers of the heart are supplied through the tenth cranial or vagus nerve and that the accelerator nerve fibers leave the spinal cord in the anterior roots of the second, third, fourth and fifth thoracic spinal nerves. If the vagi are severed the heart-beat increases to a very rapid rate, while if the accelerator nerves are severed the heart-beat is slowed down to a very low rate. Then one must conclude that under normal conditions the heart muscle is under the constant control of these two antagonistic influences.

In spinal anesthesia, particularly in high spinal, where the anesthetic drug diffuses high into the thoracic region, some of the accelerator nerve fibers to the heart are going to be involved. On the other hand the anesthetic drug never diffuses sufficiently high to involve any of the inhibitory fibers of the vagus nerve. Therefore, the inhibitory influence of the heart is left to work, not all together but partly, unopposed, and a slow heart-rate is the result in spite of the fact that the blood pressure may be at a low level. In fact, it is the patient in whom the heart-rate has been made the slowest, by high diffusion of the anesthetic drug, who has the lowest blood pressure, for the simple reason that if the drug has diffused to the accelerator fibers to the heart then all of the vasoconstrictor fibers to the splanchnic blood-vessels will have been involved in the block; consequently, a low blood pressure and a slow and feeble pulse result. It is in this situation that even one who is experienced in the management of spinal anesthesia patients, finds it most difficult to refrain from the use of the so-called heroic cardiac stimulants. The heart is not in need of stimulation, however, for it is doing its work with ease (slow rate, decreased peripheral resistance, and with perfect rhythm). What more could one ask? If one could only remember to leave the heart alone and concentrate on prevention of cerebral anemia, his patient will not die from cardiac failure. Theoretically this is true and practically it has proved to be 100 per cent correct in my own experience.

Respiratory Phenomena

The respiratory behavior during spinal anesthesia is frequently so altered from the normal as to appear to be approaching respiratory failure. This apparent danger has been the source of much unfavorable comment, particularly by those who really believe that death from this method of anesthesia is due to paralysis of the respiratory apparatus. This latter hypothesis is certainly an untenable one in face of the overwhelming evidence to the contrary.

You will recall that the nervous mechanism of respiration is widely distributed in the brain and spinal cord. One of the most important of the motor nerves of respiration is the phrenic, which originates from the 3rd, 4th and 5th cervical spinal nerves and supplies motor and sensory fibers to the diaphragm. The vagus nerve, which originates in the medulla oblongata supplies motor and sensory fibers to the larynx and bronchi, and to the lungs themselves. The nerve accessorious and branches from the cervical and brachial plexuses innervate the muscles of the neck and shoulder which are concerned in inspiration, and the intercostals innervate the muscles of the thorax and abdomen. All of these muscles belong to the skeletal group and are more or less under voluntary control. Under normal conditions, however, this entire respiratory apparatus works rhythmically without voluntary control, due to the automaticity of a respiratory center in the medulla oblongata.

In spinal anesthesia the only part of the nervous mechanism of respiration directly affected by the anesthetic drug is the innervation of the abdominal and lower intercostal muscles. The loss of motor power of these muscles is of little consequence as the patient is well able, at any stage of the anesthetic, to take deep and prolonged inspirations. Not infrequently the phrenic nerve is severed as a therapeutic measure, such as in tuberculosis, and these patients experience no

unusual difficulty in maintaining respiratory movements. I have seen anesthesia produced well above the nipple line and I have yet to see a patient who could not move the diaphragm at will. I can see no logical reasoning in the belief that spinal anesthesia ever produces paralysis of the respiratory apparatus.

The slow and shallow respiration frequently seen in spinal anesthesia is thought to be under the control of the respiratory center. This center is essentially automatic, although very sensitive to reflex stimulation. Heat, cold, fear, pain and emotion are some of the reflex stimuli that tend to increase the rate and force of respiratory movements.

The automatic stimulus of the respiratory center is believed to originate from the gases in the blood. In fact, experiments have proved conclusively that the condition of the gases in the blood has a direct and marked influence upon the activity of the respiratory center. If for any reason the blood supplying the center becomes more venous than normal, the respirations are increased in force or rate, or both. On the other hand, if the blood supplying the center is more arterialized than normal, the center acts more feebly and the respirations are decreased in force or rate, or both.

In spinal anesthesia the reflex and automatic stimuli are eliminated to a great extent. With the preliminary narcosis the patient is made drowsy and more or less unconcerned, with the result that fear and anxiety are reduced to a minimum. With the greater portion of the skin surface anesthetized the reflex stimuli of heat and cold are practically nonexistent. Furthermore, with the body motionless and with the greater portion of the motor and sensory functions paralyzed, general body metabolism is carried on at a slower rate. The demand for oxygen is less, the production of carbon dioxide is decreased, the circulation of the blood is slower, and the blood appears normally arterialized at all times. Consequently, there is not the demand for a more rapid interchange of the gases of the blood. Therefore, the respiratory center regulates the respiratory movements according to the needs of the body at that particular time. The shallow inspiration is further emphasized by the loss of motion of the abdominal and lower intercostal muscles, as the external appearance does not give one a true picture of the actual amount of respiratory motion within.

Respiratory failure can and does occur, but remember that it is brought about by allowing the brain to be drained of its blood, and not by the paralyzing effect of the anesthetic drug or the innervation of the respiratory apparatus.

Gastrointestinal Phenomena

Although the entire gastrointestinal tract is involved in spinal anesthesia, the changes that are brought about are not objectionable, with the exception of occasional nausea and vomiting and a possible involuntary stool, and are conducive to ease and rapidity with which the operative procedure can be carried out.

You will recall that the innervation of the gastrointestinal tract is supplied from the medulla oblongata through the vagus, and from the spinal cord through the pelvic and the greater and lesser splanchnic nerves. The vagus supplies the stomach, small intestine, cecum, ascending colon and a portion of the transverse colon with motor fibers. The remaining colon including the anal sphincter receive their motor fibers from the 2nd, 3rd and 4th sacral segments through the pelvic nerve. The entire gastrointestinal tract receives its inhibitory fibers from the spinal cord through the sympathetic autonomic fibers in the lower seven thoracic and upper three lumbar segments. Therefore, with spinal anesthesia induced sufficiently high for intra-abdominal operation, the motor nerves to the lower colon and anal sphincter and the inhibitory nerves to the entire gastrointestinal tract, are paralyzed. On the other hand, the vagus nerve is never involved and its motor fibers in the abdomen are left unopposed in their activity. Consequently, peristalsis is increased and the lumen of the small intestine is markedly contracted. These contracted intestines do not protrude through the operative incision, rather they fall away and abdominal packs are seldom necessary.

The actual cause of the occasional nausea and vomiting incident to spinal anesthesia can not be attributed to any specific factor and is very likely due to a multiplicity of intrinsic and extrinsic stimuli. It is observed more frequently, however, in the female. Nausea and vomiting is seldom observed in the male, either during or following the anesthesia. The preoperative condition of the patient seems to have no bearing on either the time, duration or severity of the

nausea. A patient who has suffered with nausea and vomiting daily for weeks may go through the entire period of anesthesia without the slightest signs of nausea, while one who has had no signs of nausea previously may vomit soon after anesthesia is induced. Not infrequently the sudden and rapid moving of the patient from one position to another excites nausea and vomiting where otherwise the patient would not have been nauseated at all. However, when nausea and vomiting do occur, it is of short duration and is of no consequence.

With the motor activity of the intestine and upper colon increased and with the lower colon paralyzed and the anal sphincter markedly relaxed a condition favorable to the explusion of gas is created. Even an involuntary stool is not unlikely, although this has never occurred in my own experience. It is upon this basis, however, that spinal anesthesia is sometimes recommended as a therapeutic measure in certain types of ileus.

THE USE OF RADIUM IN THE TREATMENT OF UTERINE HEMORRHAGE*

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Uterine hemorrhage is not a disease. It is not a pathological entity. It is merely a symptom of many pathological conditions; most of them local, some of them general.

With this varied etiology there is manifestly no specific routine treatment for this symptom. As these causal factors vary, one from the other, so must our treatment vary. Recognition of the causal factor in each case is the first essential.

Before discussing the value of radium in treating uterine hemorrhage we must briefly review the more important conditions in which this symptom occurs. As a working classification we may distinguish the following groups:

First, Conditions associated with pregnancy. Under this head come placenta praevia, abortions, threatened and complete, retained membranes, uterine tears, extra-uterine pregnancies, etc.

Second, Uterine neoplasms. Tumors, malignant and benign, both of cervix and of fundus.

Third, Functional or idiopathic hemorrhages, occurring both at puberty and at the menopause.

Less frequent causes are, inflammatory conditions of pelvic organs; metritis, endometritis, salpingitis and general pelvic inflammatory disease. These infections may be gonorrheal, septic, tuberculous, etc. Also uterine displacements, often with subinvolution; neoplasms, both malignant and benign, of tubes or ovaries. Finally as causal factors we must mention certain general constitutional conditions, such as diabetes, renal and heart conditions, acute infectious disease, anemia, etc.

It is clear at first sight that radium treatment would be of no value in many of these types. We can at once bar out its use in the obstetrical group. Retained membranes should be removed, lacerations repaired, and other various surgical procedures carried out as indicated.

In treatment of hemorrhages associated with inflammatory conditions the case is not quite as clear. In the early days of radium therapy the rays were supposed to have a sterilizing effect. Hence it was argued that inflammatory conditions would be benefited by their use. This idea still lingers, apparently, in the minds of many of our profession. It is incorrect. Radium rays do not sterilize. They do not inhibit bacterial growth. They do not reduce inflammation. The initial effect of radiation is a stimulating action. Pre-existing inflammations are not reduced by it but are, on the contrary, frequently made worse. Especially is this true in acute conditions. While often times in chronic conditions, such as chronic salpingitis, no bad results may be obtained; at other times this stimulating effect seems to stir up the quiescent condition and we have an acute inflammatory reaction as the final result of our treatment.

Therefore, these uterine hemorrhages which are the symptoms of pelvic inflammatory processes are not amenable to radium therapy. On the other hand in such conditions this therapy is absolutely contraindicated.

In neoplasms of tube or ovary, radiation is not, as a rule, the best treatment. While it might frequently relieve the hemorrhage, such a result is not what we are aiming at. Treatment directed toward initial cause is here of paramount importance. Operative removal, therefore, is the treatment of election in ovarian and tubal new growths, both malignant and benign, and radiation is reserved for those cases in which, for one reason or another, surgery is barred out.

The case with hemorrhage in uterine displacements is somewhat similar. Although we

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may by radiation stop the flow and possibly, as an end result, reduce the sub-involution, the displacement will still remain, with whatever chain of symptoms it had originally caused. Radiation may be used as an auxiliary treatment to some extent in many of the cases, but the most important part of the treatment are these measures which we use toward the reduction of the displacement.

When hemorrhage occurs as a result of general constitutional conditions radium radiation can only be used in these few cases in which the flow is so great that it demands especial attention in addition to the treatment directed towards the initial lesion.

This leaves us then the following classes which we may discuss as amenable to radiation. Cancers of the uterus; myomatous tumors of the uterus: functional or idiopathic uterine hemorrhage. We will consider the classes in order.

Cancer of the Uterus—We are considering, this afternoon, not the ultimate results which may be obtained as regards the permanent cure of this condition. Our attention is directed only to the effects which the treatment may have upon the symptom of hemorrhage.

I have been able to follow up 190 cases of uterine cancer which I have treated with radium between September, 1920, and December 31, 1928. While the period of time which has elapsed since the treatment of the last patient has been too short to allow any conclusions as to the ultimate effects on the cancer, it is long enough to give us some idea as to the immediate results upon the more important symptoms.

In my cases bleeding was relieved in 163, over 80 per cent of the total. Discharge was relieved in 70 per cent, while pain was relieved in a little less than 60 per cent. These statistics are about the same as those reported by other observers.

It is pertinent to note that this series embraces uterine cancer cases of all degrees of severity, the very early as well as the most advanced. Failures to relieve hemorrhage occurred without exception in the more advanced cases. Palliative radiation in the early cases, therefore, should give relief from hemorrhage in practically every case.

This hemorrhage is controlled by the natural regression which takes place when a rapidly growing mass of cancer cells is exposed to a lethal dose of radium. Cancer cells are more easily poisoned by radiation than are normal tissue cells. (Hence the so-called selective action of radium rays.) The nuclei of the cells disintegrate, the protoplasm breaks down, the detritus is carried away, the vessels sclerose and finally become obliterated. Connective tissue grows in to replace the destroyed cancer tissue, and ultimately we have a firm sclerotic connective tissue scar in the place formerly occupied by the neoplasm. These changes are, of course, gradual; the final scar not forming until many months after the treatment. For this reason the relief of hemorrhage, due to radium action, is not immediate. Such cessation does not begin until about ten days or two weeks after treatment. Until this occurs hemorrhage should be controlled as necessary by packing, with judicious use of Monsel's solution or other hemostatic.

Bleeding may return if there is a recurrence of the cancer locally. In my experience this has been rare. When the initial radium treatment fails to eradicate the cancer the recurrence is usually in the glands or the parametria. The original site of the cervical growth is much less frequently involved.

Uterine Myomata—The degree of success which the gynecologist will have in using radium to stop hemorrhage from fibroid tumor depends entirely upon the care with which he selects the cases for radiation. The majority of all fibroids are best treated by operation. About 40 per cent can and should be treated with radium. With suitable treatment in properly selected cases hemorrhage will be stopped in nearly every case. Usually one intensive treatment is sufficient. Occasionally secondary treatments are necessary.

In order that we may have a proper understanding of this treatment it will be necessary to go rather into detail regarding the type of case which is best fitted for radiation. While there are, of course, differences of opinion among gynecologists regarding some details, I believe that the composite opinion of the majority would be about as follows:

The uterus must not be larger than that of a four months' pregnancy.

The diagnosis of fibroid must be absolutely clear and the lesion must be uncomplicated. If there is a possibility that other pelvic pathology may be present laparotomy is indicated. Pelvic

inflammatory disease, acute or chronic, is an absolute contraindication.

It is best fitted for intramural growths. Radium is contraindicated in the presence of pedunculated subperitoneal nodules of any size. It is also contraindicated in large pedunculated submucous growths, especially so if they are infected.

Inasmuch as the radiation necessary is practically certain to bring on the menopause, its use should, generally speaking, be limited to women over forty.

All rules, of course, are made to be broken. These rules are no exception. Some of them, however, are far more important than others. Personally I think the first requisite, that the uterus should not be larger than a four months' pregnancy, is the least important of all. Certainly it is of minor importance when we are radiating to relieve the symptom of hemorrhage. It is true that when the fibroid is large the growth is less apt to disappear than when it is small. Burnam states that 50 per cent of the large fibroids disappear after radium radiation, while 80 per cent of those smaller than a four months' pregnancy are radically cured.

Of far greater importance than the size of the tumor is, I think, its type. If the growth be intramural, disposed along the uterine canal so that, with a long radium applicator, it can be radiated for its entire length, the prognosis, is good. But the multinodular uterus, with numerous subserous pedunculated tumors, is emphatically not the type for radiation. On account of the irregularity of the growths a proper therapeutic dose cannot be administered to all parts of the tumor. Morever, thrombosis of the vessels in the pedicle may occur as a later result of the radiation. This of course cuts off the blood supply of the pedunculated mass with a resulting necrosis and an intraabdominal sepsis.

For the same reason we must beware of those large submucous fibroids projecting down into the uterine cavity and attached to its wall by a small pedicle. These tumors are prone to necrosis at best. Thrombosis of the vessels in the pedicle occurs as it does in the case of the subserous myoma just mentioned. Necrosis and gangrene of the mass ensue. We may at times safely radiate sessile submucous growths attached to the wall over a large area. But the large growths with small pedicles should not be radiated.

Pelvic inflammatory disease as a contraindication to radiation has already been mentioned. As a general thing this rule should not be broken. However, we do occasionally have fibroid cases complicated by old adherent tubes and ovaries in which operation is for some reason contraindicated, but which must have relief from the hemorrhage caused by the fibroid uterus. Such cases may be radiated cautiously, in broken doses. But they are the few exceptions to this important rule.

Finally it is necessary to consider the question of the artificial menopause. As I have just said, radiation sufficient to stop the hemorrhage or to cure the fibroid will almost certainly bring on an artificial menopause. As a rule then, it should be confined to women past or near the time of the natural menopause. But naturally each case must be judged by itself. With younger women, exhausted by bleeding which cannot be controlled, in whom the operative risk would be great, we are justified in using radiation. But the patient must understand fully the results which will be obtained and must freely consent herself to this line of treatment.

Uterine Hemorrhage of Benign Origin Without Gross Pathological Lesions—Under this heading I include those cases of menorrhagia or metrorrhagia which on examination show no marked deviation from the normal. Admittedly, from the pathological standpoint, a number of different types are included. Many of them are manifestly endocrine in origin, especially that type which we often find at puberty.

Others of them are associated with subinvolution alone or subinvolution with displacements of greater or less severity. Still others are evidently due to microscopic changes in the endometrium, blood vessels or musculature of the uterus. Numerous classifications have been attempted by various men, none of them, however, entirely satisfactory.

Practically all hemorrhages of this type can be stopped by radium radiation. But whether or no this treatment is the best for an individual case can only be determined after a careful analysis of that case.

Certain fundamental principles already mentioned must be noted. We must remember that heavy radiations bring on the menopause. There-

fore, when all other measures have failed in younger women and radical treatment is indicated it should be carefully considered whether or not supravaginal hysterectomy with preservation of the ovarian function is not preferable. Usually it is. Sometimes in these young women, especially in those endocrine menorrhagias at puberty, a mild radiation may be given which will cause a temporary amenorrhoea with the hope that when the periods re-establish themselves they will become normal. This type of radiation is unsatisfactory. One is between the devil and the deep blue sea. Too much radiation will bring on the menopause; too little will not cure the trouble. Certainly one may say that in young women such radiation should never be attempted until all other therapy has been exhausted, and not then unless there is a definite understanding on the part of the patient of the uncertainty of the method and the possible bad results that may ensue.

Again we must be absolutely certain of our diagnosis. Careful examination under an anesthetic should precede the treatment. This should always include a curettage with examination of the scrapings by a competent pathologist in order that we may rule out malignancy. If no contraindication to treatment is to be found the radium can be immediately introduced into the cavity of the fundus, thereby avoiding a second anesthetic.

Any pathology of the tubes or ovaries which is revealed at this time is a contraindication to radiation. A quiescent gonorrheal pelvic inflammatory disease, with adherent tubes, is the complication most frequently found at this time. Radiation in such a case might light up the dormant inflammatory process and bring on a severe attack of pelvic peritonitis.

Backward or downward displacements of the uterus are not contraindications to radiation although the case should be studied to see whether a subtotal hysterectomy would not be the operation of choice.

Results of this treatment in properly selected cases in women at the time of the menopause are most excellent. The radiation dosage should be sufficient to bring on the menopause. I do not think that the symptoms of the menopause caused by radium are any more severe than the natural menopause would be in the same woman. I am certain that they are less severe than those which occur after the surgical removal of both ovaries.

The treatment, as a rule, is not especially painful. The presence of the radium capsule in the fundus of the uterus often sets up uterine contractions which, in some women, may be painful. In others the gauze packing which must be placed in the cervix and vagina causes discomfort. In many of these cases there is a marked nausea caused by the radiation. This usually comes on about six or eight hours after radiation is started, may be extreme for a while, but usually subsides before the radiation is over.

The effect on the uterine bleeding is not immediate. There is a latent period after each treatment before the actual effects begin to take place. Then the radiation effects continue for several weeks. If given shortly before a period is due that period will take place and probably be even more profuse than normal. A second slighter period appears in some cases. After that the menopause is established in the great majority. Secondary radiations should be necessary in very few cases, provided the original diagnosis had been correct and the treatment technically satisfactory.

If radium was of use only in these cases of essential uterine hemorrhage it would still have to be considered one of our most valuable therapeutic agents. This method which requires but a few days hospital detention, a light gas anesthesia, and involves at worst a moderate amount of pain, takes the place of hysterectomy, and that in patients whose general condition often times would make the major procedure one of grave operative risk.

Conclusions

1. Radium treatment for uterine hemorrhage is indicated only in certain types of uterine cancer, myomata, and essential hemorrhage.

2. Relief from hemorrhage may be expected in approximately 80 per cent of all types of uterine cancer.

3. In the early and moderately advanced types of uterine cancer, cessation of hemorrhage may be expected in nearly all cases.

4. The majority of all cases of myomatous uteri should be operated upon. About 40 per cent of all of them are suitable for radium treatment.

5. In carefully selected cases of fibroids relief from hemorrhage should be obtained in nearly every case.

6. Similar results should be obtained in properly selected cases of essential hemorrhage.

7. A careful gynecological examination and thorough analysis of the case should be made in every instance when radium treatment is considered.

8. Radiation is not indicated in the presence of pelvic inflammatory disease, acute or chronic. Neither is it indicated when any tubal or ovarian pathology of major type is present.

9. As a general rule it should be employed only in women who are near the time of the menopause or who have passed that time.

DISCUSSION

Dr. W. M. Rowlett, Tampa:

In addition to congratulating Dr. Holden upon his splendid paper, I was greatly impressed with the modesty and frankness in which he has dealt with his subject. As a rule I find an overenthusiasm seizes the physician who is doing some special work. With Dr. Holden, he seems to have substituted his enthusiasm with an appalling frankness.

I do not believe that there are any types of cases in the practice of medicine where the etiology is so uncertain as those of uterine hemorrhage. Naturally the treatment, especially the conservative, is uncertain. This etiological uncertainty is greatly exaggerated by the poor examination that is given the patient. A year ago a young woman, twenty-eight years of age, consulted me relative to a persistent uterine bleeding. Her family physician had examined her, diagnosed fibroid tumors, and had insisted upon a hysterectomy. Upon examination, I could not find the tumors, but instead a small bleeding vessel located in an old infected lacerated cervix; a gentle touching of the bleeding vessel with a Post cautery, at the time of the examination, brought about a permanent cure. Many similar cases I have found in my practice.

Like Dr. Holden, I believe that radium is the treatment par excellent for all uncomplicated, non-pedunculated fibroids that do not rise above the umbilicus. I should also like to stress the importance of his warning in the use of radium in pelvic inflammatory conditions. I can recall one case when an old latent salpingitis was aroused which nearly caused my patient's life, when I attempted to correct a stubborn metrorrhagia with the enter uterine application of radium. In those numerous cases of uterine hemorrhage where no definite pathologic condition can be found, and where there exists no inflammatory process, I believe radium application after a diagnostic currettage is a good routine. I have followed such a procedure and have gotten most gratifying results. However, great consideration must be given to the dosage and age of the patient.

Only last week there appeared in the JOURNAL of the A.M.A. a report on 250 cases of metrorrhagias, from benign causes, at the Free Hospital for Women, Brookline, Mass. The report stated:

"Of the 250 patients that had received local radium application, with the exception of 41 in whom a diagnosis of fibroid could be definitely made, only one had any demonstrable pathologic condition that might account for the abnormal flowing,— . . . all were well for six months to seven years after treatment. In the selected cases of uterine fibroids, radium application resulted in cure in 88.2 per cent."

Dr. Holden speaks of the selective action and the distintegration and breaking down of cancer cells after radiation. There has been nothing more discouraging than the pathologists efforts to aid us in determining the radio sensitivity of those cases, and now our best men are doubting whether there actually exists a specific radiosensitivity of cancer cells that are based on cell type. They are beginning to believe that the amenability of cancer to radium instead of being that of the cell type depend more on the relative amount of connective tissue that the tumor possesses. We have, likewise, found out that the adeno-carcinoma is very radio-resistant, but just why, they have been unable to tell us. We do know, however, that there exists in all of our patients that condition known as resistance. The amount of this so-called resistance is going a long way in determining the results of our treatment.

Dr. Frederick J. Waas, Jacksonville:

Regarding carcinoma of the cervix from a radium standpoint:

A few years ago I was very much enthused over operating these cases, and felt I was getting very good results. I remember quite well a case I considered inoperable, an elderly woman, that I referred to Dr. Holden for radium. I felt that it was a desperate case, did not feel that anything would make an impression; she was beyond 60 years of age, but I referred her to Dr. Holden. That was five years ago. Today her cervix is as

clean as the palm of the hand. It converted me very markedly toward the use of radium in carcinoma of the cervix. I am now beginning to feel rather reluctant to operate any case of carcinoma of the cervix. Have had quite a number of recurrences, and the cases referred to Dr. Holden from that standpoint, I feel have really gotten gratifying results. I have really been converted to the use of radium in carcinoma of the cervix by Dr. Holden.

Myopathic hemorrhages in young girls:

Bleeding in this group is frequently excessive, and is almost always due to endometrial hyperplasia, in fact, menorrhagia or metrorrhagia may be so excessive as to produce extreme secondary anemia. I think these cases are entitled to very serious consideration before advising radical surgery or radium. One of the happiest events in a young girl's life is looking forward to motherhood. If radical measures are resorted to, this naturally precludes the possibility of motherhood, hence, a keen disappointment to the patient. As an etiological factor the question of endocrine imbalance should be given consideration. Blood transfusion should also be considered before resorting to any radical measures.

Dr. Harry A. Peyton, Jacksonville:

We are very fortunate, indeed, to have this subject presented by Dr. Holden. It is rather unusual that we have a paper on radium treatment by one who is both a radiologist and gynecologist. It is for this reason that this communication is so conservative in its general tone. In the past we have heard too much of the advantages of radium and different claims for it which have not since been substantiated. Radium has now been in use a sufficient time for us to judge of its real value in certain diseases.

As to the indications: first, cancer of the cervix. Of course, Dr. Holden spoke from the standpoint of hemorrhage. I may digress to this extent, to say that now it is generally conceded that the use of radium in cancer of the cervix is by far the better of the two methods of treatment —the other being surgical. The end results with comparatively small mortality are all in favor of radium treatment. This, however, does not apply in carcinoma of the fundus of the uterus. In the operable cases it is much better to do surgery than to use radium where there is cancer of the fundus. In inoperable cases of cancer of the fundus, the use of radium and X-ray is indicated, and it can be used with a great deal of benefit and relief of suffering.

Our experience has been a little at variance with Dr. Holden in the percentage of myomata of the uterus favorable to radiation. I am not prepared to say exactly what the percentage is, but I am sure that it is not as high as 40 per cent. However, I agree with Dr. Holden that a myoma of the uterus in a younger woman, particularly a woman 35 to 44 years old, should be treated by means of a supra-vaginal hysterectomy rather than radiation with subsequent destruction of ovarian function. In older women (45 to 50), provided the myoma falls within the classification mentioned by Dr. Holden, or favorable to radium treatment, we find the greatest use for radium. However, I would like to sound a note of warning, and that is that radium should not be used in these patients until every means have been exhausted to exclude carcinoma—and of course that consists of diagnostic curettage and examination by a competent pathologist. The other type of myoma I think should be subjected to surgery rather than radium—that is the profusely bleeding type of myoma. We have all seen these patients bleed profusely, with a hemoglobin possibly 35 per cent or below. If we use radium in this type, we cannot expect results for some little time. In the meantime we have to control the hemorrhage. This can be controlled temporarily with packs and blood transfusion given, but where the hemoglobin is built up by these means to a safe level for operation, a supra-vaginal hysterectomy is the better way to deal with the situation.

The next type is one for which I think the future is going to hold the answer. That is the treatment of young women about the age of puberty or around 22 to 25 years old with so-called idiopathic hemorrhage. This is one of the most serious problems with which we are confronted. What to do for these young women is a serious problem. It is undesirable to give radium with the risk of bringing on a menopause, and even more so to remove the uterus and deny these young women the future possibilities of childbirth. What are we to do with them? I don't know. It certainly is a problem to work out. Certain obvious defects should be corrected, but even then there is a large number of these patients with no discoverable pathology. Recently good results have been reported from radiation

of the spleen in menorrhagias and metrorrhagias of the young. This may ultimately offer some hope.

Dr. Gerry R. Holden, Jacksonville (closing):

Just a word about bleeding in young women: Attempts have been made to handle these cases by giving radiations of low intensity, giving radium for just a few hours—a dosage which it was hoped would stop the period for a few months with the idea that when re-established they would menstruate properly. In my own hands this method has not been satisfactory. I have tried it out, but I think almost every case has been unsatisfactory. I feel very strongly against the use of radium in young women. It is far better, when we have a case of this kind, and have to do something radical, to do a hysterectomy and leave in the ovaries.

One more word about the technique of radiation: Although the technique is easy and simple, it is not a minor procedure. The same care should be given in the examination of the patient as if the case were one in which we would do a laparotomy. The procedure is carried out in the hospital under general anesthesia. The patient is first curetted and the curettings carefully examined for any possibility of malignancy. The radium capsule is introduced after curettage and treatment given.

MYASTHENIA GRAVIS—A CASE REPORT*

JOHN D. GABLE, M.D.,
Lake City.

While one can hardly say that myasthenia gravis is a disease of frequent occurrence, it is a fact that one is often called upon to take this disorder into account in the differential diagnosis of numerous other diseases, both nervous and somatic.

The unsettled question as to the cause of myasthenia gravis seems quite well illustrated by quotations from The Journal of Nervous and Mental Diseases in which periodical of August, 1928 (page 140), Arthur N. Foxe says: "Perhaps it is wise to ally our views with those of Gowers and Strumpell and see the cause in the central nervous system. That lesions have not been found constantly is no proof that they are not present. It is quite possible that our ignorance of the cause of myasthenia gravis is the same today as it was in 1902 when Gowers said, 'Thus I fear that we have not as yet found the alphabet by which these histological elements would permit us to read the story of this disease'."

In the same Journal, May, 1929 (page 530), Arie Querido of Holland concludes his summary of an excellent case report by saying: "Supported by some evidence from the literature, the hypothesis is offered that myasthenia gravis is a general vascular disease, to be defined pathologically as a perivasculitis chronica proliferous."

CASE REPORT

Patient is a white male, born in Iowa, September 6, 1885. Family history is negative. Patient had measles and mumps in childhood and, he says, no other illness until 1918 during which year he had influenza and an injury to his back. Since having influenza he thinks he has not been well at any time. He lists as his troubles since 1918 nervousness, heart trouble and back and stomach disorders.

Present Illness.—Onset was very insidious and, according to patient's statement, was variously diagnosed as hyperthyroidism, neurasthenia and psychoneurosis.

He first came under my observation January 26, 1929, at which time the diagnosis of myasthenia gravis would not have been difficult had it not already been made some six years before.

Examination showed a white male, fairly well developed, but poorly nourished. Height 69¼ inches. Weight 115 pounds. Highest weight in recent years, 124 pounds. Pulse recumbent 84, sitting 88, standing 120. Blood pressure 155/100. Kidney functional total 45 per cent. Urine showed albumen, faint trace and occasional granular cast, and was otherwise negative. Blood was negative to Wassermann test but showed non-protein nitrogen, 50. Red cells 5,400,000, white cells 4,000, and hemoglobin 70. Specialists diagnosed arrested pulmonary tuberculosis, hypertension, tachycardia, gastroenteroptosis (G. I. Series), atony of stomach, chronic colitis and chronic rhinitis.

NEUROLOGICAL EXAMINATION

Gait unsteady with flaccid swing of right leg and thigh. Deep and superficial reflexes within

*Read before the Suwannee River Medical Society, Live Oak, Jan. 10, 1930.

normal limits. General loss of strength in all muscles, the weakness being much more marked on right than left, extensor muscles stronger than the flexors, right lower limb shows a somewhat rythmical shaking movement at times. Electrical tests soon tire out almost all muscle groups but this is more decided in right lower limb.

Muscles of speech and mastication are weak. He has to stop and rest as he talks; when he laughs his lips are rigid and separate in a line and muscles of face show very little expression. When he walks some two or three hundred yards his muscles give out suddenly and he says: "If I could not sit or lie down, I would become paralyzed all over."

Some exophthalmus is present. Two basal metabolism tests showed a rate of minus 18 which was not changed by administration of thyroid substance.

Progress

From day to day he has shown very little change. Constipation is troublesome and he often complains of pain in region of kidneys.

Unlike some cases, he wakes up tired out but after having breakfast in bed, he gets up, dresses and is in good spirits until towards night again. He is cheerful and optimistic.

Intellectually, he is above the average, shows no mental deterioration nor regression and keeps up with current events. He shows about the same emotional instability as would be seen in one made as weak as he is from any other wasting disease.

Summary

The definite cause and location of myasthenia gravis are not known and there are hypotheses by some placing it in the nervous system while others suggest a vascular relationship.

In case reported the disease developed in a young man who had been healthy up to the time he had influenza and an injury to back, both in 1918. Following these, he has not been well at any time and diagnosis of myasthenia gravis was made five years after first illness and the disease has grown worse very slowly and steadily.

The questions entering one's mind are the old ones: What causes myasthenia gravis? What part, if any, did influenza play in this case? What part, if any, the injury to back?

Case has been observed for one year and will receive further follow-up.

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THE PRE-CONVENTION MEETING

The officers and Executive Committee of the Florida Medical Association announce that the annual pre-convention meeting of the officers, committeemen and councilors of the Association will be held March 6, 1930, 12:30 p. m. at the Mayflower Roof Garden, Mayflower Hotel, Jacksonville. This pre-convention meeting is for the purpose of discussing plans for the next annual meeting to be held in Pensacola in May, as well as other matters pertaining to the Association. The Scientific Program Committee will meet and select papers for the scientific program. Those members desiring to present papers at our next annual meeting should have their applications in the hands of this Committee prior to their meeting. The councilors are expected to present, in writing, their annual report. This meeting is one of the most important events in the Association during the year and all officers, committeemen and councilors are urged to attend.

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Lusambo, Congo Belge.....Atrique
Page, Walter C.,
317 Delannoy Ave. Cocoa
Thomas, A. F., 2400 Massachusetts
Ave. Cambridge, Mass.
White, Charles B. Cocoa
Wood, George W. Rockledge

BROWARD COUNTY MEDICAL SOCIETY

Robinson, Leigh F., Pres., 403 1st
Nat. Bk. Bldg.....Ft. Lauderdale
McClellan, George S., Vice-Pres.,
..... Pompano
Lingeman, Ralph B., Sec.-Treas.,
915 1st National Bank Bldg.,
.....Ft. Lauderdale
Brown, Oliver C., 411 1st National
Bank Bldg. Ft. Lauderdale
Butler, Bruce F.,
206 Bank Bldg. Hollywood
Carter, Donald E., 915 1st National
Bank Bldg. Ft. Lauderdale
Darrow, Anna E.,
310 S. E. 7th St. Ft. Lauderdale
Hartley, James M.,
Central Arcade Hollywood
Hendricks, Elliott M., 311 1st Nat'l
Bank Bldg. Ft. Lauderdale
Johnston, John A.,
Oliver Bldg. Ft. Lauderdale
Kinsey, E. T.,
406 N. E. 2nd Ave.....Miami
Klussman, Richard M.,
144 S. George St. York, Pa.
Lowry, Robert S.,
544 S. E. 6th Ave....Ft. Lauderdale
McLaury, Elbert, 214-220 1st
National Bank Bldg.....Hollywood
Peavy, Henry J., 505 1st National
Bank Bldg. Ft. Lauderdale
Roper, Luther E.,
2011 Hollywood Bldg.....Hollywood
Skiff, Francis S., 303 1st National
Bank Bldg. Ft. Lauderdale
Stanford, John A., 205 1st Nat'l
Bank Bldg.....Ft. Lauderdale
Stovall, R. H., 1st National
Bank Bldg. Ft. Lauderdale
Walker, Harrison A., 214-220 1st
National Bank Bldg.....Hollywood
Winsor, Sanford A.,
City Pharmacy Pompano

COLUMBIA COUNTY MEDICAL SOCIETY

Caldwell, Herbert, President, Lake City
Gable, J. D., Vice-Pres.....Lake City
Witt, T. W., Sec.-Treas.....Lake City
Anderson, L. M.,
P. O. Box No. 7.....Lake City
Arnold, L. J. Lake City
Bates, Thomas H.,
Blanche Hotel Annex....Lake City
Dyer, James H.,
U. S. Veterans' Hosp.....Lake City
Farnell, Perry C.,
24 N. Marion St. Lake City
Harkness, Robert B.,
605 E. Duval St.....Lake City
Nichols, William S.,
Pharmacy Bldg. Lake City
Rogers, A. E. Lake City

DADE COUNTY MEDICAL SOCIETY

Cleghorn, Charles D., President,
1109 Huntington Bldg.....Miami
Holmes, R. J., Vice-Pres.,
601 Huntington Bldg.....Miami
Harris, Robert M., Secretary,
1001 Huntington Bldg.....Miami
Dunaway, Carl E., Treasurer,
401 Huntington Bldg.....Miami
Adkins, E. H.,
608 Huntington Bldg.....Miami
Agos, Isadore H.,
410 Huntington Bldg.....Miami
Allen, Omer F.,
711 Huntington Bldg.....Miami
Aronovitz, Samuel,
601 Professional Bldg.....Miami
Babcock, Donald T.,
Calumet Bldg. Miami
Babcock, Henry C.,
414 Calumet Bldg. Miami
Baker, Juel M.,
312-14 Seybold Bldg.....Miami
Baker, L. A.,
570 W. Flagler St.....Miami
Barfield, J. O.,
312 N. W. Third Ave.....Miami
Barge, H. A.,
420-421 Calumet Bldg.....Miami
Barge, W. J.,
420-421 Calumet Bldg.....Miami
Benton, George H.,
1503 Pizarro St. Coral Gables
Bertram, Albert J.,
37 N. W. 1st St. Miami
Boughton, Herman,
441 Washington Ave...Miami Beach
Bullard, Clifford P.,
215 Seybold Bldg.....Miami
Burch, R. N.,
2827 N. Miami Ave.....Miami
Carter, A. C., Hahn Bldg.....Miami
Chambers, Silas E.,
403 Huntington Bldg.....Miami
Chandler, G. E.,
Huntington Bldg. Miami
Conger, George D.,
2164 N. W. 28th St.....Miami
Coplan, M. M.,
601 Huntington Bldg.....Miami
Couric, Edmonson S.,
P. O. Box 265, Lemon City...Miami
DeBoe, Michael P.,
1st National Bank Bldg.....Miami
Dobrin, Max,
Professional Bldg. Miami
Dodge, Percy L.,
812 Huntington Bldg.....Miami
DuPuis, J. G., Lemon City.....Miami
Eckman, Benjamin F.....Homestead
Elder, Samuel F.,
Huntington Bldg. Miami
Elgin, Lee W.,
508 Huntington Bldg. Miami
Ellis, William H.,
315 Olympia Bldg. Miami
Flipse, Matthew J.,
306 Huntington Bldg.....Miami
Fox, H. H., Box 601 Miami
Foxworthy, F. W.,
911 Huntington Bldg. Miami
Freeman, Mary Perrine
French, Elmo D.,
603 Huntington Bldg. Miami
Ghertler, Max,
1715 S. W. 11th St. Miami
Goodson, W. M.,
315 Olympia Bldg.....Miami
Gowdy, Francis A.,
120-21 Shoreland Arcade.....Miami
Gowdy, Ralph A.,
925 Lincoln Road.....Miami Beach
Graves, J. Raymond,
309 Huntington Bldg.....Miami
Grimes, Dewey H., Box 377, South Miami
Haggard, William A.,
502 Security Bldg.....Miami
Hall, E. J., 201 Venetian Bldg...Miami
Hall, John E., Box 2722.....Miami
Hall, Thomas B.,
Aladdin Bldg. Miami Beach
Harris, David W.,
403 Huntington Bldg. Miami
Hart, Oliver J.,
301 East 20th St...New York, N. Y.
Hassell, C. S.,
Huntington Bldg. Miami
Heck, Maurice E.,
601 Professional Bldg.....Miami
Hatch, Ernest B.,
71 N. E. 11th St.....Miami
Hodsdon, Benjamin F.,
418-20 Security Bldg.....Miami
Hodsdon, L. A.,
418-20 Security Bldg.....Miami
Holmes, Albert G. H.,
420 N. E. First Ave.....Miami
Hotchkiss, W. T.,
Aladdin Bldg. Miami Beach
Hutson, Thomas W.,
309 Huntington Bldg.....Miami
Ingersoll, J. M.,
1700 S. Bayshore Lane.....Miami
Jaudon, E. K.,
404 N. E. 27th St. Miami
Jeffrey, S. L.,
4022 Douglas Road.....Miami
Jenkins, Leslie M.,
712 Huntington Bldg.....Miami
Jenkins, Paul K.,
604 Fifth St. Miami Beach
Jones, Walter C., Jr.,
409 Calumet Bldg.....Miami
Jordan, W. B. Homestead
Keeler, Frank L.,
P. O. Box 1250 Miami
Keely, J., 161 N. E. 2nd St.....Miami
Kemp, Austin J.,
207-10 Congress Bldg.....Miami
Kennon, Charles L.,
411-12 Huntington Bldg.....Miami
Kirsch, Maxwell D.,
408 Huntington Bldg.....Miami
Lanier, W. T.,
19 S. W. 7th Ave.....Miami

Leavitt, H. A.,
127 N. E. 5th St. Miami
Letholz, R.,
911 Huntington Bldg.....Miami
Lewis, Taylor,
302-4 Congress Bldg.....Miami
Light, S. D. W., Calumet Bldg...Miami
Lithgow, William D.,
245 N. E. 25th St.....Miami
Litterer, A. Buist,
603 Huntington Bldg.....Miami
Lott, Young C.,
144 N. E. 2nd Ave. Miami
Lucinian, Joseph H.,
403 Huntington Bldg.....Miami
Luke, J. M. J., Congress Bldg....Miami
Lustgarten, A.,
144 N. E. 2nd Ave.....Miami
Lyell, Robert O.,
305-10 Huntington Bldg.....Miami
MacDonell, George N.,
care Division of Health.....Miami
McGunagle, J. E.,
1885 W. Flagler St. Miami
McKenzie, E. N., Calumet Bldg., Miami
McKenzie, J. S.,
Rosetta Theatre Bldg.....Miami
McKenzie, Olin G.,
324 Calumet Bldg. Miami
McKibben, William W.,
205 Calumet Bldg. Miami
Manson, Plumer J.,
Rosetta Theatre Bldg.....Miami
Marsh, Lucille Johnson,
704 Professional Bldg.....Miami
Martin, M. C.,
548 W. Flagler St.....Miami
Maxwell, E. B., Gowdy Clinic....Miami
Medlin, Willard B.,
502 Security Bldg.....Miami
Milton, J. D.,
905 Huntington Bldg.....Miami
Moore, Alfred Kendall
Moss, William H.,
44 N. E. 1st Ave. Miami
Newell, C. E., 21 S. W. 12th Ave., Miami
Nichol, Edward S.,
306 Huntington Bldg.....Miami
Palmer, B. H.,
502 Huntington Bldg.....Miami
Panettiere, Cayctano,
Aladdin Bldg. Miami Beach
Paulk, George A.,
202 Venetian Bldg.....Miami
Payne, J. W.,
161 N. E. 2nd St.....Miami
Payton, Frazier J.,
Allison Hospital.....Miami Beach
Pearson, Homer L., Jr.,
610 Huntington Bldg. Miami
Pearson, J. R., Olympia Bldg....Miami
Pearson, Nelson T.,
1st National Bank Bldg.....Miami
Pearson, Rufus J.,
306 Calumet Bldg.....Miami
Peters, Edgar,
506 Olympia Bldg.....Miami
Phillips, Kenneth,
120-21 Shoreland Arcade.....Miami
Quillian, Warren,
Coral Gables Clinic....Coral Gables
Raap, Gerard,
809 Huntington Bldg.....Miami
Repass, Robert E., cor. Lincoln Rd.
and Washington Ave...Miami Beach
Roche, Charles F.,
Aladdin Bldg. Miami Beach
Ryan, William B., Jr.,
Huntington Bldg.....Miami
Sayles, Charles F.,
311 N. W. 3rd St.....Miami
Schubert, Frank P.,
Allison Hospital.....Miami Beach
Shaw, E. Clay,
508 Huntington Bldg.....Miami
Shisler, J. W.,
205 Shoreland Arcade Miami
Simmons, John A. Arcadia
Simpson, J. R.,
1st Nat'l Bank Bldg., Ft. Lauderdale
Sinclair, J. A. B.,
1603 N. E. Second Ave.....Miami
Skaggs, P. T., Box 615.....Miami
Smith, C. Kirby,
210 E. Flagler St.....Miami
Smith, J. F.,
1110 Lincoln Road Miami Beach
Smith, J. W.,
1760 N. W. 5th St.....Miami
Smith, M.
405-6 Huntington Bldg.....Miami
Snyder, John W.,
402 Huntington Bldg.....Miami
Stewart, J. S.,
1051 Seybold Bldg. Miami
Stuart, J. D.,
127 N. E. 5th St. Miami
Tallman, Maurice H.,
312 Venetian Arcade.....Miami
Thomas, Edwin C.,
45 N. E. 5th St. Miami
Thomas, Kelly C.,
330 N. W. 1st St. Miami
Thorne, James I.,
701 Seybold Bldg.....Miami
Threlkeld, Major E.,
205 Calumet Bldg.....Miami
Tumlin, Corbett E.,
315 Olympia Bldg. Miami
Turner, John C., Tatum Bldg....Miami
Vinson, Willie J.,
120 Shoreland Arcade.....Miami
Vogt, Ferdinand A.,
207 Calumet Bldg. Miami
Walters, Arthur L.,
337 Lincoln Road.....Miami Beach
Watters, W. H., Boston-Miami Clinic,
P. O. Drawer H.....Coconut Grove
Weiland, A. H.,
227 Aragon Ave. Coral Gables
Welch, P. B.,
227 Aragon Ave. Coral Gables
Westermann, Julius T.,
P. O. Box 1542.....Miami
Whitaker, Joel,
401 C. of C. Bldg., Indianapolis, Ind.
White, David W.,
337 Lincoln Road.....Miami Beach
Whitten, Benjamin L., Box 505, Miami
Wilson, M. C.,
606 Huntington Bldg.....Miami
Withers, G. H.,
Aladdin Bldg. Miami Beach
Wood, Arthur W.,
416 Security Bldg. Miami
Woodard, Robert C.,
203 Venetian Arcade.....Miami
Youmans, Corren P.,
701 Professional Bldg.....Miami
Youmans, I. C.,
Professional Bldg. Miami

DE SOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY

Poucher, Allen A., President
..... Wauchula
McSwain, D. L., Vice-Pres.....Arcadia
Highsmith, G. F., Sec.-Treas....Arcadia
Aurin, E. C. Ft. Ogden
Bevis, Henry P. Arcadia
Chandler, Isaac W.,
First Trust Bldg. Avon Park
Garner, John E. Thomaston, Ga.
Kayton, M. C. Wauchula
Kirkpatrick, Charles H.,
Box 454 Arcadia
Mitchell, John W. Sebring
Pyatt, Wesley S. Bowling Green
Touchton, W. C. Avon Park
Weems, Howard V.,
22 Oak St. Sebring
Witt, C. C. Arcadia

DUVAL COUNTY MEDICAL SOCIETY

Jelks, Edward, President, Riverside
Hospital Jacksonville
Holloway, Luther W., Vice-Pres.,
359 St. James Bldg. ...Jacksonville
Morris, Kenneth A., Secretary,
Professional Bldg.....Jacksonville
Shaw, W. McL., Treasurer, St.
James Bldg. Jacksonville
Adams, George E.,
6620 Buffalo Ave. Jacksonville
Adams, Thomas S.,
615 Lynch Bldg. Jacksonville
Alford, Neil,
St. James Bldg. Jacksonville
Arms, B. L. Idaho Falls, Idaho
Bacon, Henry,
2737 Vernon Terrace...Jacksonville
Baker, R. M.,
Professional Bldg. Jacksonville
Baker, W. J. Foley
Barfield, Frederick G.,
St. James Bldg. Jacksonville
Baumgartner, Carl J.,
406 Masonic Bldg.....Jacksonville
Bayless, W. C.,
202 St. James Bldg.....Jacksonville
Beals, John A.,
care Dr. S. S. Marshbants,
Med. Arts Bldg., Chattanooga, Tenn.
Beckman, George E.,
Professional Bldg.....Jacksonville
Black, J. B.,
St. James Bldg.....Jacksonville
Blackmar, Ray W., 320-321 St.
James Bldg. Jacksonville
Blinn, T. A.,
St. James Bldg.....Jacksonville
Boone, James L., 500 Professional
Bldg. Jacksonville
Bowen, Frederick J.,
St. James Bldg.....Jacksonville
Boyd, John E., 342 St. James
Bldg. Jacksonville
Bransford, L. E.,
Professional Bldg.....Jacksonville
Brewster, Warren A. Callahan
Brillhart, H. L.,
Graham Bldg. Jacksonville
Brink, F. A., 502 King St., Jacksonville
Brinson, P. A. Baldwin
Brinson, W. D. Baldwin
Broadbent, Oliver P.,
1022 Park St. Jacksonville
Bryant, James M.,
305 Wade Bldg. Jacksonville
Buckman, Thomas E.,
1022 Park St. Jacksonville
Carefoot, E. I.,
Professional Bldg.....Jacksonville
Carradine, J. H. Orange Park
Cason, Turner Z.,
2033 Riverside Ave....Jacksonville
Chapman, Benjamin A.,
348 St. James Bldg....Jacksonville
Chilli, Joseph L.,
318 St. James Bldg....Jacksonville
Collins, C. C.,
St. James Bldg.....Jacksonville
Copeland, Silas M.,
203 St. James Bldg....Jacksonville
Copp, F. A.,
458 St. James Bldg....Jacksonville
Counts, H. W., Peninsular
Casualty Bldg.....Jacksonville
Croft, Theodore G.,
St. James Bldg.....Jacksonville
Cunningham, Lester W.,
St. James Bldg.....Jacksonville
Day, Gaston,
St. James Bldg.....Jacksonville
Dean, Russell,
St. James Bldg. Jacksonville
Drew, Horace R.,
St. James Bldg. Jacksonville
Driskell, Simon E.,
St. James Bldg. Jacksonville
Enneis, F. B.,
Professional Bldg. Jacksonville
Erwin, Stanley,
1001 Lynch Bldg.....Jacksonville
Faver, Robert M. Lake Geneva
Field, Thomas S.,
712 Laura St.....Jacksonville
Fisher, L. C.....Green Cove Springs
Fort, Frank L.,
Professional Bldg.....Jacksonville
Furnish, Richard D.,
452 St. James Bldg....Jacksonville
Gammon, Julian E.,
700 Professional Bldg., Jacksonville
Goethe, James E.,
209 St. James Bldg....Jacksonville
Goodale, Banks H.,
St. James Bldg. Jacksonville
Gorman, John M.,
424 St. James Bldg....Jacksonville
Greene, Ralph N., Wade Bldg.,
1022 Park St. Jacksonville
Gwinn, Van H.,
2585 Riverside Ave....Jacksonville
Harrell, D. E.,
St. James Bldg.....Jacksonville
Harris, Herrman H., 608 Greenleaf
& Crosby Bldg.....Jacksonville
Harris, W. G.,
St. James Bldg. Jacksonville
Hartman, James H.,
546 Lomax St. Jacksonville
Harwell, D. F., Peninsular Cas-
ualty Bldg. Jacksonville
Heggie, N. M.,
33-36 Buckman Bldg...Jacksonville
Henson, Graham E.,
201-2 St. James Bldg...Jacksonville
Herlong, M. B.,
211 St. James Bldg....Jacksonville
Hodges, John W., U. S. Veterans'
Bureau, 111 N. Canal St.
.....Chicago, Ill.
Holden, Gerry R., Wade Bldg.,
1022 Park St.....Jacksonville
Horne, Hendley F.,
St. James Bldg. Jacksonville
Humphreys, David G.....Fernandina

Ira, Gordon H.,
452 St. James Bldg.....Jacksonville
Ives, Harold A.,
711 Roselle St.....Jacksonville
Jennings, C. L.,
Wade Bldg. Jacksonville
Johnston, Crowell W.,
404 St. James Bldg.....Jacksonville
Jones, F. C., Graham Bldg., Jacksonville
Keisling, Frederick C.,
315 Professional Bldg., Jacksonville
Key, Foster P. Green Cove Springs
Killinger, Raymond R.,
St. James Bldg.....Jacksonville
Kirby-Smith, Joseph L., 511-15
Greenleaf & Crosby Bldg.
..... Jacksonville
Kirk, William W., 608 Greenleaf
& Crosby Bldg.....Jacksonville
Knauer, W. J.,
Buckman Bldg.....Jacksonville
Knight, A. Comer,
Professional Bldg.....Jacksonville
Krueger, Frederick W.,
452 St. James Bldg....Jacksonville
Limbaugh, Louie M.,
458 St. James Bldg.....Jacksonville
Love, J. D., 2063 Oak St....Jacksonville
McEuen, Harry B., 320 Profes-
sional Bldg. Jacksonville
McGinnis, Robert H.,
2063 Oak St. Jacksonville
McIver, Robert B.,
St. James Bldg. Jacksonville
McKenzie, Albert C.,
326 St. James Bldg.....Jacksonville
Mabry, C. B.,
St. James Bldg. Jacksonville
Manhoff, Ben,
712 Laura St.....Jacksonville
Manning, William S.,
St. James Bldg. Jacksonville
Martin, P. H.,
Professional Bldg.....Jacksonville
May, Robert D.,
305 Professional Bldg...Jacksonville
Milam, Ernest B., Wade Bldg.,
1022 Park St. Jacksonville
Mitchell, George M.,
712 Laura St. Jacksonville
Mitchell, John H.,
300 Professional Bldg, Jacksonville
Moe, Leonard N.,
212 St. James Bldg.....Jacksonville
Morgan, Thomas E.,
St. James Bldg.....Jacksonville
Morris, S. A.,
237 W. Duval St.....Jacksonville
Norris, Samuel R., Wade Bldg.,
1022 Park St. Jacksonville
Norwood, J. K.,
211 St. James Bldg.....Jacksonville
Oetjen, G. F.,
St. James Bldg.....Jacksonville
Owens, J. H.,
452 St. James Bldg.....Jacksonville
Parramore, James B.,
401 St. James Bldg.....Jacksonville
Pasco, J. D., Wade Bldg.,
1022 Park St.....Jacksonville
Peterson, C. A.,
St. James Bldg.....Jacksonville
Peyton, Harry A.,
2033 Riverside Ave.....Jacksonville
Porter, H. W.,
348 St. James Bldg.....Jacksonville
Proctor, Harper L.,
210 Professional Bldg., Jacksonville
Ramage, Raymond B., 219-20
Professional Bldg.....Jacksonville
Randolph, J. H.,
St. James Bldg.....Jacksonville
Reaves, H. A.,
Professional Bldg.....Jacksonville
Richards, Ferdinand,
Professional Bldg.....Jacksonville
Richardson, George W.,
343 St. James Bldg.....Jacksonville
Richardson, Shaler,
111 W. Adams St.....Jacksonville
Rogers, W. W.,
Professional Bldg.....Jacksonville
Rollins, Clarence D.,
2162 Riverside Ave.....Jacksonville
Ross, W. E.,
St. James Bldg.....Jacksonville
Sanderson, Raymond, 216 Pro-
fessional Bldg. Jacksonville
Sandusky, C. M.,
28 W. Monroe St.....Jacksonville
Schnauss, William R., 312 Hilde-
brandt Bldg. Jacksonville
Schneider, David, Greenleaf &
Crosby Bldg. Jacksonville
Sellers, E. T., 412-413 St. James
Bldg. Jacksonville
Sengstak, Ernst P. E.....Mandarin
Simpson, James K.,
712 Laura St.....Jacksonville
Skipper, C. T.,
St. James Bldg.....Jacksonville
Smith, Ralph E.,
211 E. Forsyth St.....Jacksonville
Stollenwerck, A. D.,
25 W. Beaver St.....Jacksonville
Swift, Edwin C.,
2033 Riverside Ave.....Jacksonville
Taylor, H. Marshall,
111 W. Adams St.....Jacksonville
Teeter, Edmund H.,
305 St. James Bldg....Jacksonville
Thomas, Robert Y. H.,
502-4-6 Lynch Bldg.....Jacksonville
Thompson, David C.,
2579 Herschell St.....Jacksonville
Thompson, T. C.,
318 Hildebrandt Bldg..Jacksonville
Tyler, Lockland V.,
San Marco Square..So. Jacksonville
Upchurch, Noble A.,
City Board of Health..Jacksonville
Van Schaick, Harold D.,
210 St. James Bldg.....Jacksonville
Veal, Ernest W.,
128 St. Johns Ave., So. Jacksonville
Waas, F. J.,
Professional Bldg.....Jacksonville
Washburn, Clayton D.,
St. James Bldg.....Jacksonville
Wilcox, Clarence R.,
712 Laura St. Jacksonville
Wilkinson, Albert H.,
313 Professional Bldg., Jacksonville
Wilson, Alpheus K.,
334 St. James Bldg.....Jacksonville
Wilson, J. F., 310-12 Greenleaf &
Crosby Bldg.....Jacksonville
Woolsey, Bertram F.,
320 St. James Bldg.....Jacksonville
Wynn, Robert S., 305 Consolidated
Bldg. Jacksonville

ESCAMBIA COUNTY MEDICAL SOCIETY

Lischkoff, Mozart A., President,
Blount Bldg. Pensacola
Thames, Rufus, Vice-Pres.....Milton
Bell, John D., Sec.-Treas., 305
Blount Bldg. Pensacola
Ames, Allen M.,
206 Blount Bldg.....Pensacola
Anderson, Warren E., 511 American
Nat'l Bank Bldg.....Pensacola
Bickerstaff, James H.,
Blount Bldg.....Pensacola
Bryans, H. L.,
21½ E. Wright St.....Pensacola
Bryans, R. L.,
23 E. Wright St.....Pensacola
D'Alemberte, Clinton W., 302 Amer-
ican Nat'l Bank Bldg.....Pensacola
Dewberry, W. C.,
Theisen Bldg. Pensacola
Dodson, M. W. Munson
Fellows, J. H., Brent Bldg....Pensacola
Gachet, Necy L. Century
Haisfield, Abram R.,
311 Blount Bldg.....Pensacola
Heinberg, Charles J.....Pensacola
Hixon, F. P. Pensacola
Hoffman, James M.,
Pensacola Hospital.....Pensacola
Holley, John C. Milton
Mixon, J. A., Box 697.....Pensacola
Nobles, R. G., Blount Bldg...Pensacola
Nobles, V. R., Blount Bldg....Pensacola
Nobles, W. D. Pensacola
Payne, W. C., Blount Bldg....Pensacola
Peel, George T., Brent Bldg., Pensacola
Pierpont, Juriah H., 511 American
Nat'l Bank Bldg.....Pensacola
Pollock, William A. J., Jr.,
303 Theisen Bldg.....Pensacola
Quina, M. E. Pensacola
Renshaw, F. G.,
104 S. Palafox St. Pensacola
Simpson, Horace L.,
303 Theisen Bldg. Pensacola
Stokes, Thomas H.,
Theisen Bldg. Pensacola
Sullivay, Rosa L.,
1016 W. Chase St.....Pensacola
Turberville, John S. Century
Turner, John B. Bagdad
Webb, Carol C.,
303 Blount Bldg. Pensacola

HAMILTON COUNTY MEDICAL SOCIETY

Barnett, R. A., Sec'y.....White Springs
Bruce, John R. Jasper
Corbett, J. H. Jasper

HILLSBORO COUNTY MEDICAL SOCIETY

Marney, Charles R., President
242 Lafayette Arcade.....Tampa
Bidwell, Alfred M., Vice-Pres., 401
First Nat'l Bank Bldg.....Tampa
Barker, Frank T., Sec.-Treas.,
302 Krause Bldg.....Tampa
Adamson, William P.,
610 Citizens Bank Bldg.....Tampa
Allen, Bundy,
302 Citizens Bank Bldg.....Tampa
Alsobrook, John W.,
120 N. Collins St.....Plant City
Andrews, Chadbourne A.,
715 Citizens Bank Bldg.....Tampa
Baldwin, R. E.,
817 Citizens Bank Bldg.....Tampa
Bartlett, Charles W., Jr.,
1521 7th Ave. Tampa
Beyer, A. R., Box 474.....Tampa
Bitzer, Emory W.,
815 Citizens Bank Bldg.....Tampa
Black, Robert C.,
101 San Ever St.....Plant City
Blackman, H. J.,
Citizens Bank Bldg.....Tampa
Blake, W. C.,
412 Citizens Bank Bldg.....Tampa
Boling, John R.,
1207 First Nat'l Bank Bldg....Tampa
Bottari, Giulio C.,
1829½ Seventh Ave.....Tampa
Butchart, T. R.,
112 N. Boulevard Tampa
Byrd, Hiram,
35 W. Bethune.....Detroit, Mich.
Carlton, Leland F.,
805 Citizens Bank Bldg.....Tampa
Carter, E. F.,
1903 Grand Central Ave.....Tampa
Chandler, J. C.,
Citrus Exchange Bldg.....Tampa
Christian, George R.,
305 Citizens Bank Bldg.....Tampa
Cook, George L.,
906 South Rome Ave.....Tampa
Cook, H. M.,
309 E. Ross Ave.....Tampa
Costa, Frank J.,
1801½ 22nd St. Tampa
Cowart, James T.,
906 South Rome Ave.....Tampa
Crum, James W.,
412 Schulte United Bldg.....Tampa
Daniels, Benjamin A.,
608 Tampa St. Tampa
Davis, John McM.,
1207 First Nat'l Bank Bldg..Tampa
Deedera, Carleton,
102 Habana St. Tampa
Dickinson, Josbua C.,
302 Citizens Bank Bldg.....Tampa
Draper, Arthur D.,
5607 Florida Ave. Tampa
Duke, Roncie R.,
708 Citizens Bank Bldg.....Tampa
Duncan, William P.,
401 Tampa Theatre Bldg.....Tampa
Dyer, Walter H.,
1801½ 22nd St.....Tampa
Edwards, W. E.,
Oak Park Station.....Tampa
Efird, Lester J.,
509 Stovall Bldg.....Tampa
Ely, R. A., 404½ Zack St.....Tampa
Estes, J. L.,
815 First Nat'l Bank Bldg..Tampa
Etheredge, S. H.,
317 Citizens Bank Bldg.....Tampa
Farrior, Joseph B.,
605 Citizens Bank Bldg.....Tampa
Faver, Henry M.,
402 Citrus Exchange Bldg..Tampa
Fluker, Carl B., 608 Tampa St., Tampa
Forbes, Sherman B.,
409 Citizens Bank Bldg.....Tampa
Foster, John C., 216 Cass St....Tampa
Gale, John S.,
5402 Central Ave.....Tampa
Gilbert, Elsie,
6508 Central Ave.....Tampa
Gilmer, Eugene S.,
612 Citizens Bank Bldg.....Tampa
Glass, Roscoe E., 914 14th Ave., Tampa
Grantham, James M.,
242 Lafayette Arcade.....Tampa

Gyland, Stephen P.....Brewster
Hamner, George P.....Penney Farms
Hampton, H. S.,
P. O. Box 2113.....Tampa
Hardy, G. E. W.,
818 First Nat'l Bank Bldg., Tampa
Helms, J. S.,
Citizens Bank Bldg.....Tampa
Henderson, R. P.,
613 Citizens Bank Bldg.....Tampa
Higgins, Allen F.,
230 Lafayette Arcade.....Tampa
Hopkins, Clack D.,
810 S. Fremont Ave.....Tampa
Hubbard, Roscoe C.,
2220 7th Ave. Tampa
*Ives, A. C., Hinson Bldg.....Tampa
Jefferson, Rollin,
818 First Nat'l Bank Bldg...Tampa
Jenson, Henry J.,
7303 Nebraska Ave.....Tampa
Jobson, A. M. C.,
910 First Nat'l Bank Bldg...Tampa
Knauf, A. R.,
810 Citizens Bank Bldg.....Tampa
Knight, J. C. Plant City
Lake, Esley T., Box 8968.....Tampa
Lancaster, William J., Box 2856, Tampa
Lassman, George,
516½ Franklin St.....Tampa
Lowry, Blackburn W.,
408 Citrus Exchange Bldg...Tampa
McEachern, J. R., Box 1181.....Tampa
McMurray, Henry E.,
211 Cardy Street.....Tampa
McRae, E. H.,
402 Citrus Exchange Bldg...Tampa
Maguire, Thomas C.,
104 S. Collins St.....Plant City
Maner, George R.,
5202 Central Ave. Tampa
Martin, Douglas D.,
906 S. Rome Ave. Tampa
Meighen, Douglas G.,
325 Lafayette Arcade.....Tampa
Mills, David A.,
812 S. Rome Ave.....Tampa
Mills, John H.,
910 E. Michigan Ave.....Tampa
Mitchell, L. B., Box 737.....Tampa
Myers, Wade C.,
302 Schulte United Bldg....Tampa
Nelson, Robert G.,
712 Citizens Bank Bldg.....Tampa
Oppenheimer, Louis S.,
408 Citizens Bank Bldg.....Tampa
Ortega, Rafael, 1805 15th St....Tampa
Pate, Julien C.,
1107 First Nat'l Bank Bldg., Tampa
Patterson, William,
Citrus Exchange Bldg.....Tampa
Pearson, R. J.,
Route 1, Box 186.....Tampa
Rankin, Grover C., Box 2233....Tampa
Rowlett, W. M., Box 603.....Tampa
Saxton, J. J., 205 Zack St.....Tampa
Sharer, E. F., 1801½ 22nd St....Tampa
Smith, Burdette,
411 Citrus Exchange Bldg., Tampa
Smith, H. Mason,
903 Tampa Theatre Bldg....Tampa
Smith, Walton H. Y.,
City Health Dept.....Tampa
Smoak, Edward,
315 Citizens Bank Bldg.....Tampa
Snow, H. O.,
1903 Grand Central Ave.....Tampa
Spengler, Nathaniel L.,
903 Tampa Theatre Bldg.....Tampa
Stone, Alvord L.,
603 Citizens Bank Bldg.....Tampa
Stringer, Sheldon,
P. O. Box 162.....Tampa
Taylor, Joseph W.,
Room 807, 706 Franklin St., Tampa
Thorpe, Franklin, 500 Beaux Arts
Bldg. Los Angeles, Calif.
Torbett, R. S.,
619 Citizens Bank Bldg.....Tampa
Truelsen, Thomas,
Room 605, 706 Franklin St., Tampa
Vaughan, Cecil,
908 First Nat'l Bank Bldg., Tampa
Weekley, Augustine S.,
325 Lafayette Arcade.....Tampa

JACKSON COUNTY MEDICAL SOCIETY

Harrison, C. H., Sec.-Treas...Cottondale
Baltzell, N. A. Marianna
Box, Wilmer C. Graceville
Burns, M. Q. Blountstown
Dowling, J. B. Alliance
Finley, D. H. Blountstown
Hodges, G. S. Marianna
Hudgens, Thomas H. Sneads
McKinnon, Daniel A. Marianna
McLeod, John E.,
R.R. Station No. 2.....Cypress
Marshburn, Eustis R.,
Coca-Cola Bldg. Marianna
Miller, Redden L., Box 186....Graceville
Price, C. J. Alford
Ryals, C. H., R. F. D No. 1, Grand Ridge

LAKE COUNTY MEDICAL SOCIETY

Colley, Sanford C., President...Tavares
*Calvin, William J., Vice-Pres.,
Box 966 Eustis
Ashton, Wilbur L., Sec.-Treas., Umatilla
Coupland, James D.....Eustis
DeVane, W. G. Groveland
Fenn, Harry T. Mount Dora
Hannum, M. M. Eustis
Holland, Howard G.,
202 State Bank Bldg.....Leesburg
Izlar, A. L. Clermont
Lodor, Charles H.,
Palm Pharmacy Bldg.....Eustis
Lott, Walter M., 953 McClurkan
Ave. Nashville, Tenn.
Toy, Samuel H. Umatilla
Tyre, C. McK.....Eustis
Williams, Rabun H.,
Theatre Bldg. Eustis

LEE COUNTY MEDICAL SOCIETY

Longhrake, Guy A., President,
308 2nd St. Ft. Myers
Jones, H. Quillian, Sec.-Treas.,
18-20 Leon Bldg.....Ft. Myers
Bostleman, Ernest,
201 Pythian Bldg.....Ft. Myers
Grace, William H.,
15 Earnhardt Bldg.....Ft. Myers
Harrison, Warren A.,
Pythian Bldg. Ft. Myers
Hunter, A. P.,
Langford Bldg. Ft. Myers
Merrick, Charles G.,
Leon Sims Bldg. Ft. Myers
Newton, Robley D. Ft. Myers
Seebold, J. L. LaBelle

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY

Davis, Julius C., Jr., President,
203-8 Masonic Temple.....Quincy
Moor, F. Clifton, Sec.-Treas.,
Telephone Bldg. Tallahassee
Barnes, Benjamin F.....River Junction
Bertrem, J. Willie.....Havana
Brinson, John B., Jr.,
Dogwood St. Monticello
Daves, F. E. Chattahoochee
Dozier, L. L. Tallahassee
Folmar, James Q.....Chattahoochee
Gainey, J. G. Quincy
Gardner, O. W.....Greensboro
Glover, George B.....Monticello
Godard, Robert F., Key Bldg....Quincy
Inman, Joseph C., Jr., Florida
State Hospital Chattahoochee
Johnston, John K.,
Exchange Bank Bldg...Tallahassee
Kendrick, Odis, G.....Tallahassee
Miles, W. G. Chattahoochee
Palmer, Henry E.,
408 South Adams St....Tallahassee
Pound, J. H.....Chattahoochee
Rhodes, Bricey M.,
121 E. College Ave.....Tallahassee
Sapp, H. H.....Havana
Walker, William H.....Lamont
Weems, George E.....Apalachicola
Wilhoit, Sterling E.....Quincy
Wilkinson, B. A.,
Telephone Bldg. Tallahassee
Williams, J. F.....Monticello

MADISON COUNTY MEDICAL SOCIETY

Yates, D. H., President.....Madison
Kinsey, Junius P., Vice-Pres....Pinetta
Davis, George O., Sec.-Treas...Madison
Blalock, Alonzo L.....Madison
Hamrick, B. F.....Madison
Long, E. Madison
McLeod, R. F., P. O. Box 637..Madison

MANATEE COUNTY MEDICAL SOCIETY

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Harrison, M. M., Vice-Pres...Bradenton
Davis, John McM., Sec.-Treas.,
1207 First Natl. Bank Bldg..Tampa
Brown, J. O.....Palmetto
Bryan, Clarence H.,
Dixie Grande Hotel.....Bradenton
Clark, T. C.....Bradenton
English, A. Q.....Palmetto
Field, Charles H.....Marietta, Ga.
Fleming, Claude F.....Elkhart, Ind.
Gates, Hubbard,
P. O. Box 245.....Bradenton
Hollingsworth, Samuel G.,
451 12th St.....Bradenton
Lancaster, B. M.....Manatee
Larrabee, Charles W.,
Larrabee Hospital.....Bradenton
Leflingwell, John B.,
First Natl. Bank Bldg...Bradenton
McCoy, Thomas S., Singletary-
Cummings Bldg. Bradenton
McDuffie, Toliver M.....Manatee
Mason, John F.....Bradenton

MARION COUNTY MEDICAL SOCIETY

Stutts, Baldwin S., President,
Anderson Bldg. Dunnellon
Ferguson, R. D., Vice-Pres.,
Box 802 Ocala
Wallis, Thomas H., Sec.-Treas.,
104 S. Magnolia St.....Ocala
Baskin, J. G.....Dunnellon
Chalker, James L.,
108 S. Magnolia St.....Ocala
Curry, J. F. Dunnellon
Dozier, Henry C.,
9 North Magnolia St.....Ocala
Freeman, Albert H.,
Holder Block Ocala
Laffitte, L. Sydnor Gulf Hammock
Lane, W. K.....Ocala
Lindner, E. G. Ocala
Lisk, Percy F.....Ft. McCoy
Martin, I. E.....Ocklawaha
Moore, J. N.,
210-12 Professional Bldg.....Ocala
Peek, Eugene G.,
104 S. Magnolia St.....Ocala
Slaughter, T. K.....Oxford
Strange, J. L.....McIntosh
Strickland, Edgar E.....Citra
Turner, Smith L.....Williston
Van Engelken, Louis H.....Ocala
Watt, Harry F.,
Holder Block Ocala

MONROE COUNTY MEDICAL SOCIETY

Keating, William B., President,
627 Eaton St.....Key West
Pintado, Nilo C., Vice-Pres.,
330 Duval St.....Key West
Warren, William R., Sec.-Treas.,
511 Eaton St.....Key West
Galey, Harry C.,
532 Fleming St.....Key West
Lowe, Eugene C.,
713 Eaton St.....Key West
Plummer, George,
504 Simonton St.....Key West
Porter, Joseph Y., Jr.,
417 Eaton St.....Key West

ORANGE COUNTY MEDICAL SOCIETY

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Spiers, William H., Vice-Pres.,
209 Clinic Bldg.....Orlando
Chappell, John R., Secretary,
Box 1370 Orlando
Collins, Charles J., Treasurer,
209-212 Exchange Bldg.....Orlando
Andrews, Laurin L.,
Florida Sanitarium.....Orlando
Andrews, Mitchell M.,
Box 1817.....Orlando
Ashley, K. C.,
Florida Sanitarium.....Orlando
Beardall, Harold M.,
147 E. Church St.....Orlando
Brinson, H. Kissimmee
Burks, B. Auxford,
108 E. Park Ave.....Winter Park
Butler, Paul T.,
314 State Bank Bldg.....Orlando
Carroll, C. Apopka
Christ, Calvin D.,
11 Lucerne Circle.....Orlando
Coffin, C. E., 336 Interlachen
Ave. Winter Park
Craney, Edward T.,
Orlando Clinic Orlando
Day, Horace A.,
209-212 Exchange Bldg.....Orlando

Dodds, William H.,
11th St. & Penn. Ave....St. Cloud
Edwards, Gaston H.,
Clinic Bldg. Orlando
*English, David E.,
23 E. Livingston Ave.....Orlando
Folsom, Spencer A.,
11 Lucerne Circle.....Orlando
Gardner, J. F.....Winter Park
Geiger, Hugh S.,
24½ Broadway Kissimmee
Gray, Frank D.,
11 Lucerne Circle.....Orlando
Gwynn, Humphrey W.,
Clinic Bldg. Orlando
Harms, F. H.,
40 N. Orange St.....Orlando
Hoffman, Carl D.,
25-27 Autrey Arcade.....Orlando
Hotard, Roland F.,
226 E. Park Ave.....Winter Park
Ingram, L. C. Orlando
Johnston, Colonel George,
217 E. Amelia.....Orlando
Johnston, Hewitt,
11 Lucerne Circle.....Orlando
Jones, Allan.....Holopaw
*Kime, R. R.....Orlando
Lawson, Ben H.....Winter Garden
Lewis, P. M.,
Rose Bldg. Orlando
McBride, Thomas E.....Apopka
McElroy, Sylvan,
248 S. Orange Ave.....Orlando
McEwan, John S.,
Clinic Bldg. Orlando
Mallory, Meredith,
Clinic Bldg. Orlando
Marshall, C. J.....Sanford
Neal, Thomas A.,
356 N. Orange Ave.....Orlando
Oertel, H. B.,
1415 E. Colonial Drive....Orlando
Orr, Louis McD., Jr.,
11 Lucerne Circle.....Orlando
Osincup, Gilbert S.,
300 E. Colonial Drive.....Orlando
Perkins, Herman Holopaw
Person, W. C., P. O. Box 571..Orlando
Pines, John A., Orlando Clinic..Orlando
Reading, John L.,
126 S. Orange St.....Orlando
Rivers, Thomas M.....Kissimmee
Shoemaker, Samuel A.,
30 East Church St.....Orlando
Sinclair, W. E.,
Clinic Bldg. Orlando
Summitt, R. E.....Shamrock
Westcott, William E.,
Florida Sanitarium.....Orlando
White, Roland T.,
211 S. Rosalind Ave.....Orlando

PALM BEACH COUNTY MEDICAL SOCIETY

Herpel, Frederick K., President,
Box 1057 West Palm Beach
Schiffli, O. F., Vice-Pres.,
.....West Palm Beach
Lewis, Gaylord, Secretary,
Guaranty Bldg. .. West Palm Beach
Netto, Lloyd J., Treasurer, 415 Comeau Bldg. West Palm Beach
Arnold, Wilbur O.,
Box 1735 West Palm Beach
Baldwin, R. Henry, 309 Harvey
Bldg. West Palm Beach
Bazemore, Mary K., Daniels & Fisher Stores Denver, Colorado
Binkley, John F., 1206 Harvey
Bldg. West Palm Beach
Blair, William M., 424 Comeau
Bldg. West Palm Beach
Brantley, Grady H.,
811½ Lake Ave.....Lake Worth
Buck, W. J.....Belle Glade
Carlisle, J. L., 307 Harvey
Bldg. West Palm Beach
Clay, B. S., 1203 Harvey
Bldg. West Palm Beach
Cooley, Roy O.,
Box 1735.....West Palm Beach
Dawson, George M., P. O. Box
1836 West Palm Beach
Denison, Raymond C.,
117 North J St.....Lake Worth
Fleming, Samuel W., 417 Harvey
Bldg. West Palm Beach
Gardner, W. H.,
Guaranty Bldg. ..West Palm Beach
George, William W., 1116 Harvey
Bldg. West Palm Beach
Gerlach, Earl B., 326 Lakeview
Ave. West Palm Beach
Gill, Richard S.....Hopewell, Va.
Gunter, T. D.,
Box 85.....West Palm Beach
Heath, Guy W., 409-11 Harvey
Bldg. West Palm Beach
Herman, F. Peter, 1007 Harvey
Bldg. West Palm Beach
Jared, Vernon M.,
Box 1956 West Palm Beach
Newton, S. B.,
168 Sea Breeze Ave.....Palm Beach
Oughterson, William A.,
Rm. 506, 2054 E. 90..Cleveland, Ohio
Papot, Grace E., 310 Comeau
Bldg. West Palm Beach
Peek, Leon A., 119 S. Narcissus
St. West Palm Beach
Peery, E. W., 524 Comeau
Bldg. West Palm Beach
Pittman, J. H.....West Palm Beach
Powell, J. A.,
Box 561.....West Palm Beach
Rodrick, A. F.,
21 Baker St.....Beverly, Mass.
Rowe, A. L.,
Grady Hospital.....Atlanta, Ga.
Rozier, Lauchlin McK., 411-414 Comeau Bldg. West Palm Beach
Sayad, William Y., 1215 Harvey
Bldg. West Palm Beach
Shackelford, C. W...West Palm Beach
Shackelford, W. L...West Palm Beach
Sory, B. B., Jr.....Lake Worth
Spooner, D. S.....Pahokee
Stone, Vale D., 411 Comeau
Bldg. West Palm Beach
Van Landingham, William E.,
Box 758.....West Palm Beach
Webb, Roy Palm Beach
Weems, Nat. M.....Boynton
Wilbur, A. B.
Whitman, Frank S., 511-12 Comeau
Bldg. West Palm Beach

PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY

Jackson, Thomas F., President,
Box 241.....Dade City
Dame, George A., Vice-Pres.,
115 Main St.....Inverness
Creekmore, George R., Sec.-Treas.,
112 N. Main St.....Brooksville
Bradshaw, J. T.....Lake Jovita
Cannon, Augustus B.....Lacoochee
Coogler, A. C.....Brooksville
Furlow, L. T.....Brooksville
Hancock, William S., Jr.,
.....New Port Richey
Hudson, P. J.....Crystal River
McLeod, Thomas.....Lacoochee
Miller, J. F.....Inverness
Moon, William B.....Crystal River
Sistrunk, Robert D.....Dade City

PINELLAS COUNTY MEDICAL SOCIETY

Wade, Hugh W., President, 512 Florida Power Bldg.....St. Petersburg
Winchester, Harold E., First
Vice-Pres. Dunedin
O'Brien, Raymond K., Second Vice-Pres., E. 105 5th Ave., N.,
.....St. Petersburg
Feaster, Orion O., Secretary, Power & Light Bldg. St. Petersburg
Post, William G., Jr., Treasurer,
814-815 Power & Light Bldg.,
.....St. Petersburg
Alhaugh, Andrew P. ...Tarpon Springs
Anderson, Willam D.,
Box 53.....Largo
Bieker, Annette M.,
Power & Light Bldg. St. Petersburg
*Bieker, Siegfried B.,
Power & Light Bldg. St. Petersburg
Black, M. Eldridge,
311 Coachman Bldg....Clearwater
Brown, Harold O.,
Coachman Bldg.....Clearwater
Bucknell, Howard,
..... Upper Saranac, N. Y.
Burnette, Elmer W., First Natl.
Bank Bldg.....Tarpon Springs
Coll, Hugh J.....Connellsville, Pa.
Cooper, J. H., First Natl.
Bank Bldg.....St. Petersburg
Cranford, J. F., 512-14 First Natl.
Bank Bldg.....St. Petersburg
Davies, Ray,
523 W. 6th St...Los Angeles, Calif.
Davis, W. M.,
342 1st Ave., N.....St. Petersburg
Dawson, S. A., 105-107 Medical
Arts Bldg.....St. Petersburg
Dickerson, Lucien B.,
Williamson Bldg. Clearwater
Echard, T. B.....Connellsville, Pa.
Fisk, Harley B., 914 West Coast
Title Bldg. St. Petersburg
Funk, Neil E., 401 1st Natl.
Bank Bldg. St. Petersburg
Gable, Linwood M., 803 First Natl.
Bank Bldg. St. Petersburg
Gable, N. Wilson, First Natl.
Bank Bldg. St. Petersburg
Gable, N. Worth, 807 First Natl.
Bank Bldg. St. Petersburg
Green, T. H.,
Power & Light Bldg..St. Petersburg
Griffin, Thomas R.,
Power & Light Bldg..St. Petersburg
Groves, W. H.....Clearwater
Harden, W. W.,
Smith Bldg. St. Petersburg
Hardenbergh, John A.,
Sta. A, Box 305.....St. Petersburg
Heihner, Eugene A.,
Power & Light Bldg..St. Petersburg
Herring, John A.,
Medical Arts Bldg...St. Petersburg
Hooper, C. A.....Charlotte, N. C.
Jennings, Frank S.....Dryden, N. Y.
Kaufman, Frank E.,
Coachman Bldg.....Clearwater
Knowlton, R. H.,
Power & Light Bldg..St. Petersburg
Lambdin, L.,
Box 1805 St. Petersburg
Leith, Richard B.,
201 Snell Bldg.....St. Petersburg
Lochner, G. M., First Natl.
Bank Bldg.....St. Petersburg
Lustig, Emil,
500 7th Ave., N.....St. Petersburg
McCallister, Archie,
Meres Bldg.....Tarpon Springs
McConnell, Whitman C., 104-113
Medical Arts Bldg..St. Petersburg
MacCordy, Earl C.,
202 Snell Bldg.....St. Petersburg
Marr, Norval M.,
Power & Light Bldg..St. Petersburg
Mease, John A.,
Virginia Ave.....Dunedin
Melville, Edmond J.,
335 Third Ave., N...St. Petersburg
Mighell, Norman E.....Clearwater
Miller, George E., 208-210 Medical
Arts Bldg.....St. Petersburg
Mills, A. L., 806 Power
& Light Bldg.....St. Petersburg
Moeller, Maximilian W.,
525 1st Ave., N.....St. Petersburg
Murphy, Ralph D.,
Box 82.....St. Petersburg
Nettles, Robbins,
402-5 Coachman Bldg. ..Clearwater
Nickle, Millen A.,
503-5 Coachman Bldg....Clearwater
Osgood, G. E.,
2804 4th St., S.....St. Petersburg
Peabody, J. D.,
Box 24 St. Petersburg
Pierce, L. H.,
care J. B. Balch..Kalamazoo, Mich.
Prather, B. T., First Natl.
Bank Bldg.....St. Petersburg
Putnam, Harry L., 201 Arlington
Terrace St. Petersburg
Quicksall, William E., 222 Taylor
Arcade St. Petersburg
Remington, Alvah C.,
304 West Ave.....Rochester, N. Y.
Rieger, O. Paul, Care Weirton
Steel Co.....Weirton, W. Va.
Roope, A. P.....Columbus, Ind.
Roush, Franklin W.,
Power & Light Bldg..St. Petersburg
Rudolph, Councill C.,
512 Power Bldg.....St. Petersburg
Ruff, Joseph F., Bank of
Clearwater Bldg.....Clearwater
Sackett, Harry R.,
1027 15th Ave., N...St. Petersburg
Sarven, James D.,
P. O. Box 193....Middleton, Mich.
Simcox, Lawrence, Clifton Springs
Sanitarium..Clifton Springs, N. Y.
Solomon, H. D.,
Power & Light Bldg..St. Petersburg
Strickland, Jesse A., 712 Power
& Light Bldg.....St. Petersburg
Stuart, M. H., 814 First Natl.
Bank Bldg.....St. Petersburg
Timberlake, Gideon, 6th Floor
Times Bldg.....St. Petersburg
White, Benjamin L., 202 First Natl.
Bank Bldg.....St. Petersburg
Whitford, Grace R.....Ozona

Williams, Carl A.,
Box 975.....St. Petersburg
Wood, Alvin J., 801 First Natl.
Bank Bldg.....St. Petersburg
Wylie, LeRoy A., 210-213 Medical
Arts Bldg.....St. Petersburg

POLK COUNTY MEDICAL SOCIETY

Carefoot, G. H., President...Ft. Meade
Smith, Samuel F., Vice-Pres.,
Marble Arcade Bldg.....Lakeland
Watson, Herman, Sec.-Treas.,
P. O. Box 944.....Lakeland
Alexander, Omer R., Rm. 25 & 26
Beymer Bldg.....Winter Haven
Besenbruch, Peter W.,
Orange St.....Davenport
Biddle, Percy D., 309 E. 49th St., Care
Midtown Hospital..New York, N. Y.
Causey, Thomas W.,
307 Marble Arcade.....Lakeland
Clark, Samuel A.,
209 E. Main St.....Lakeland
Cline, R. L.,
P. O. Box 462.....Lakeland
Cordes, Henry B., Jr.,
P. O. Box 84.....Frostproof
Deal, Charles C.,
208 Bank Bldg.....Auburndale
Elder, Eugene B.....Knoxville, Tenn.
Epling, Brady D.....Lake Wales
Farmer, Charles H.,
City Hall.....Lakeland
Griffin, J. D.,
Polk County Trust Bldg...Lakeland
Hargrove, Julian L.,
Polk County Hospital.....Bartow
Hughes, Robert L.,
225 E. Main St.....Bartow
Koon, Alpheus C.,
513 W. Lemon.....Lakeland
Lester, John G.,
Marble Arcade.....Lakeland
Lindsey, Sherrod A.....Ft. Meade
Love, Cicero W.,
P. O. Box 505.....Lakeland
Lowry, J. B.....Nichols
McKnight, George S.....Haines City
McMurray, E. R.,
655 Wilson Ave.....Bartow
Martin, Emmett E.,
152 7th St.....Haines City
Mooty, Ross H.....Winter Haven
Murphy, C. H.....Bartow
Murphy, H. K.,
Polk & Main Sts.....Mulberry
*Oglesby, John McG.....Bartow
Overstreet, George C.,
Marble Arcade.....Lakeland
Pearce, C. C.....Mulberry
Richards, H. Mercer,
Box 72.....Lakeland
Shafer, W. W.....Haines City
Sherman, William E.,
716 W. Central Ave..Winter Haven
Simmons, Thomas G.,
Corlett Bldg.....Auburndale
Simpson, W. T.....Winter Haven
Stetson, A. G. C.,
941 S. Success Ave.....Lakeland
Sullivan, Raleigh R., 1006 Marble
Arcade Bldg.....Lakeland
Tillis, W. L., 215 Marble
Arcade Bldg.....Lakeland
Tinkler, B. R.,.....Lake Wales
Tomlinson, J. P.,
Salter Hospital Eufaula, Ala.
Vassar, T. D.,
Strand Bldg.....Lakeland
Weed, Walter A., Morrell
Memorial Hospital Lakeland
Wilhoyte, Roy E.....Lake Wales
Wilson, Cecil H.,
145 East Main St.....Bartow
Wilson, John F., Jr., 207-9 Spencer
Futch Bldg.....Lakeland

PUTNAM COUNTY MEDICAL SOCIETY

Hosey, John T., President.....Palatka
Warren, Edmund W.,
Sec.-Treas. Palatka
Campbell, Ezra T.....Welaka
Ford, Edward W.....Crescent City
Main, Daniel C.....Crescent City
Miller, W. S.....Palatka
Rosborough, D. Y. Palatka
Strong, S. B.,
Prado 98.....Havana, Cuba
Woerner, L. Interlachen
Zeagler, G. M., Davis Bldg.....Palatka

ST. JOHNS COUNTY MEDICAL SOCIETY

Webb, Walter D., President,
Alcazar Hotel.....St. Augustine
Burnett, Wilbur E., Secretary,
118 Bay St.....St. Augustine
White, Herbert E., Treasurer, 401 First
Natl. Bank Bldg.....St. Augustine
Estes, Edgar S., 305-309 First
Natl. Bank Bldg.....St. Augustine
Guy, Walter B.,
52 Central Ave.....St. Augustine
Irwin, J. M.....St. Augustine
Parkinson, W. N.,
East Coast Hospital..St. Augustine
Potter, George W.,
East Coast Hospital..St. Augustine
Scruggs, S. A.....St. Augustine
Spencer, J. J.....St. Augustine
Stanton, Gordon Hastings
Stevens, E. Luther.....St. Augustine
Underwood, Arthur W.,
16 St. Francis St.....St. Augustine
Walkup, A. Clark,
116 St. George St.....St. Augustine
Walton, Milton.....Hastings
Worley, S. G.,
212 West King St.....St. Augustine

ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN COUNTY MEDICAL SOCIETY

Newnham, J. A., President.....Stuart
Davis, Claude L., Sec-Treas.,
..... Okeechobee
Blshop, J. W. Lake City
Boothe, R. C.....Ft. Pierce
Clark, H. D., Ft. Pierce Bank &
Trust Bldg. Ft. Pierce
Council, Melton D.,
Arcade Bldg. Ft. Pierce
Glidden, C. H. Ft. Pierce
Hardie, Grover C.,
134½ N. 2nd St.....Ft. Pierce
Parker, J. D.....Stuart
Whiddon, Lester L.,
205-6 Arcade Bldg.....Ft. Pierce

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Patterson, John C., Vice-Pres.,
First Bank & Trust Bldg..Sarasota
Metzger, Frank C., Sec.-Treas.,
224 Commercial Court....Sarasota
Cribbins, Orville H.,
224 Commercial Court....Sarasota
Griffin, Harold W.....Villa Ricca, Ga.
Halton, Jack Sarasota
Harris, J. E.,
224 Commercial Court....Sarasota
Johnston, W. J.,
215 Commercial Court....Sarasota
Kennedy, David R., First Bank &
Trust Bldg.....Sarasota
Morton, Arthur O.,
Commercial Court Sarasota
Myers, Nicholas P.....Dowling Park
Taylor, T. W.,
Walpole Bldg. Sarasota
Wilson, Cullen B., First Bank &
Trust Bldg. Sarasota

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..... Sanford
Langley, W. T., Vice-Pres.,
Meisch Bldg. Sanford
Denton, John T., Sec.-Treas.,
Meisch Bldg. Sanford
Knox, A. W.,
Brumley-Puleston Bldg.....Sanford
Martin, John W.,
Box 95 Oviedo
Park, Charles L., 515-16 First Natl.
Bank Bldg. Sanford
Puleston, Samuel,
Brumley-Puleston Bldg.....Sanford
Selman, G. S.,
Lake View Ave. Sanford
Smith, Henry D.,
108½ Park St.....Sanford
Stevens, Ralph E.,
First and Palm Ave.....Sanford
Strode, Robert C.....Melbourne
Tolar, Julian N.,
First St. Sanford

SUMTER COUNTY MEDICAL SOCIETY

Mitchell, W. E., Sec.-Treas.,
P. O. Box 237 Coleman
Albritton, Andrew B.....Wildwood
Wood, S. C. Leesburg

SUWANNEE COUNTY MEDICAL SOCIETY

Anderson, Thomas S., President,
P. O. Box 127.....Live Oak
Strickland, Henry M., Vice-
Pres. Live Oak
White, W. C., Sec.-Treas.,
412 S. Ohio Ave.....Live Oak
Airth, Henry F.,
106 W. Howard St.....Live Oak
Dicks, Reid E., Box 104, 22nd
St. Sta. St. Petersburg
Price, Joshua M.,
Alemar Bldg. Live Oak

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Richardson, John R., President,
..... Carbur
Weeks, J. L., Vice-Pres.....Perry
Greene, Ralph J., Sec.-Treas.....Perry
Bryan, W. H.....Scanlon
Cline, D. E.....Perry
Culpepper, C. T.....Perry
Ellis, John C.....Perry
Warren, George H., Main St.....Perry

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Davis, Joseph B., President, Halifax
District Hospital....Daytona Beach
Miller, R. L., Vice-Pres.,
148½ S. Beach St....Daytona Beach
Wells, J. Ralston, Sec.-Treas.,
Woolworth Bldg. ...Daytona Beach
Bates, George L., 504½ Main St.,
Penn. Sta. Daytona Beach
Biddle, J. K., Rm. 606
Walpark Bldg. Mansfield, Ohio
Bohannon, Clyde C.,
154 1st Ave.....Daytona Beach
Bouchelle, Louis B.....New Smyrna
Brown, L. V. L.....DeLand
Carter, Emory A., Dreka Bldg...DeLand
Chandler, J. R.,
120 Volusia Ave.....Daytona Beach
Chowning, W. C.,
111 Palmetto St.....New Smyrna
Clemmer, Charles A.,
913 Main St.....Daytona Beach
Davis, C. W.,
231 Coates St.....Daytona Beach
Davis, George A.,
Dreka Bldg. DeLand
Dillard, T. H. DeLand
Esche, J. P., 315 S. Penn
Drive Daytona Beach
Farmer, Myron H.,
221 Orange Ave.....Daytona Beach
Fogarty, Joseph N.,
220 Magnolia Ave..Daytona Beach
Forster, Davis New Smyrna
Genge, Victor P.....Daytona Beach
Glatzau, L. W., Dreka Bldg....DeLand
Henry, H. W.,
205 State Bank Bldg...New Smyrna
Howe, Raymond, 229 N. Ridgewood
Ave. Daytona Beach
Howe, Roy,
222 Volusia Ave.....Daytona Beach
Johnson, Joseph L.,
135 Canal St.....New Smyrna
LeBreton, Prescott,
40 North St.....Buffalo, N. Y.
Merryday, H. L.....Daytona Beach
Miller, B. E.,
412 Canal St.....New Smyrna
Munson, Albert S.,
110 S. Boulevard.....DeLand
Myres, M. J., Rm. 5
Post Office Bldg....Daytona Beach
Pay, W. C.,
221 W. Rich Ave.....DeLand
Rawlings, James E.,
221 Orange Ave.....Daytona Beach
Taylor, Joseph E.....DeLand
Taylor, William H.,
6553 Harvard Ave.....Chicago, Ill.
West, Hugh.....DeLand
White, J. Blake.....Ormond Beach
Williams, W. J.....Seville

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Huggins, E. L., President.....Freeport
McSween, J. C., Vice-Pres.,
.....DeFuniak Springs
Williams, A. G., Sec.-Treas..Lakewood
McGuire, J. J.....DeFuniak Springs
Spires, G. W. Darlington
Stephens, S. E. Laurel Hill
Webb, Edward P.,
City Pharmacy Crestview

WASHINGTON-HOLMES COUNTY MEDICAL SOCIETY

Harper, C. W., Sec.-Treas.....Chipley
Carter, George W.....Caryville
Coleman, W. E. Chipley
McClure, Herbert A. Chipley
Miller, G. C. Chipley
Paul, L. H. Bonifay
Tiller, O. B. Chipley

* Deceased.

STATE NEWS ITEMS

Dr. Guy L. Hunner of Baltimore recently addressed the Pinellas County Medical Society on the subject of "Ureteral Stricture and the General Practitioner."

* * *

The State Board of Health reports a case of rabies in a human being which occurred at Pensacola during the month of January.

* * *

The next meeting of the State Board of Medical Examiners will be held in Lakeland, June 16th and 17th. The Board has made a recent ruling that in the future, each applicant will be required to write his own examination in the English language, and will not be permitted the use of an interpreter, a privilege heretofore granted foreign applicants.

* * *

Drs. J. B. Farrior, J. C. Dickinson, J. L. Estes, J. W. Taylor and W. M. Rowlett of Tampa were guests at the annual banquet of the Pasco-Hernando-Citrus County Medical Society given at New Port Richey on the evening of January 9th. Dr. J. F. Jackson of Dade City, president of the society, after calling the meeting to order, turned the gavel over to Dr. G. A. Dame of Inverness, who acted as toastmaster. Dr. Farrior, the newly elected president of the Hillsboro County Medical Society, and Dr. Rowlett, representing the Florida Medical Association, as councilor of the Thirteenth District, gave talks on organized medicine. Dr. Herman Watson of Lakeland, chairman of the Legislative Committee of the State Association, spoke on the proposed Basic Science law. The occasion was proclaimed by all as one of the most delightful medical banquets they had ever attended.

* * *

Births in families of members of the Florida Medical Association:

To: Dr. and Mrs. M. W. Dodson, Pensacola, a boy—M. W. III, October 7, 1929.

To: Dr. and Mrs. F. Kitchens, Miami, a boy, John Linden Kitchens, November 1, 1929.

To: Dr. and Mrs. T. E. Morgan, Jacksonville, a boy, Thos. Edward Morgan, Jr., November 9, 1929.

* * *

Dr. J. J. Spencer of St. Augustine left recently for Brooks Field, Texas, where he will take a three months' course in aviation medicine and surgery. Dr. Spencer is a captain in the reserve corps.

On January 24th, the Pinellas County Medical Society held its bi-monthly meeting. The following scientific papers were read: "Lipiodol in Pulmonary Diagnosis"—Dr. J. C. Dickinson, Tampa; "Obstructions of the Pylorus in Infants and Children"—Dr. J. Knox Simpson, Jacksonville.

* * *

Dr. Lucille S. Blachly arrived in Jacksonville the last of January to assume the duties of Director of the Bureau of Child Hygiene and Public Health Nursing of the Florida State Board of Health, on February 1st.

* * *

Dr. Henry C. Dozier, president of the Florida Medical Association, announces the appointment of Dr. J. N. Moore of Ocala as representative of the Florida Medical Association to the one hundredth annual meeting of the Tennessee State Medical Association, to be held at Nashville, in April. Dr. Moore is a native of Tennessee and a graduate of Vanderbilt.

* * *

DUVAL COUNTY MEDICAL SOCIETY HAS COME TO THE FORE WITH A ONE HUNDRED PER CENT PAID MEMBERSHIP FOR 1929. THIS IS A SPLENDID ACHIEVEMENT FOR WHICH A GREAT DEAL OF CREDIT IS DUE DR. W. McL. SHAW, WHO SERVED AS TREASURER.

* * *

The Bureau of Vital Statistics of the State Board of Health has taken temporary quarters on the fourth floor of the Florida Theatre Building in Jacksonville. This was necessitated by the crowded condition in the State Board of Health Building. Dr. Paul Eaton, Director of Laboratories, and Dr. Lucille Blachly, Director of the Bureau of Child Hygiene and Public Health Nursing, will occupy the space vacated by the Vital Statistics Bureau.

* * *

The Suwannee River Medical Society met in regular session at Live Oak, January 10th. After dinner and a social program, a business and scientific meeting was held. The following papers were read by guests of the Society: "Repair of Hernial Openings with Facia Strips" (with lantern slides), Dr. Harry Peyton, Jacksonville; "Discovery and History of X-ray", Dr. W. McL. Shaw, Jacksonville.

Dr. Henry Hanson, State Health Officer, attended the opening session of the Post-Graduate Obstetrical Course which was conducted in Thomasville, Ga., during the week of January 27th to 31st. This course was held at the Archbold Memorial Hospital and was given by Dr. J. R. McCord, professor of obstetrics, Emory University. The course was sponsored by the Children's Bureau of the Department of Labor, and was free to physicians and others who wished to attend. A similar course is proposed for ten or fifteen different locations in Florida if the medical profession expresses approval and its desire to have such a course, which consists of lectures, lantern slide demonstrations and several moving picture films of operations and actual labor.

* * *

The many friends of Dr. J. E. McLeod of Cypress will regret to learn that he has been incapacitated for several months due to an accident wherein one of his knees was crushed. While convalescing, Dr. McLeod contracted influenza which delayed his recovery, but he is now gradually regaining his health.

* * *

The Sarasota County Medical Society held its annual election of officers on January 12th. Dr. T. W. Taylor was elected president, Dr. J. C. Patterson, vice-president, and Dr. F. C. Metzger, secretary-treasurer. Dinner was served to sixteen members and guests which comprised members from Manatee and Sarasota County Medical Societies. Following the dinner, a scientific program was held. The following papers were read: "Pellagra," by Dr. J. E. Harris, Sarasota; "Blood Transfusions," by Dr. D. R. Kennedy, Sarasota.

* * *

Drs. H. A. Barge and W. J. Barge of Miami announce the removal of their offices to 420-421 Calumet Building.

* * *

The annual election of officers of the Lee County Medical Society resulted as follows: Dr. W. H. Grace, Ft. Myers, president; Dr. R. W. Newton, Ft. Myers, vice-president; and Dr. H. Quillian Jones, Ft. Myers, secretary-treasurer.

* * *

Dr. Chas. E. Dowman of Atlanta addressed the Medical Study Club of Orlando February 1st at 8:30 p. m., his subject being "Intractable Pain." Following the scientific program, a buffet supper was served.

Dr. Homer L. Pearson announces the removal of his office from the Gowdy Clinic, 120 Shoreland Arcade, Miami, to 610 Huntington Building, Miami.

* * *

Dr. Maurice E. Heck of Miami is planning to give a course in surgical operative technique on the cadaver and on dogs during the months of April and May.

* * *

A letter has been received from the secretary-editor of the Tennessee State Medical Association, inviting the members of the Florida Medical Association to attend the next annual meeting of the Tennessee State Medical Association which will be held at Nashville, April 8, 9 and 10. This meeting will be the one hundredth anniversary of the Association's organization and a program is being planned which will be in harmony with the spirit of the occasion. There are many physicians in Florida who graduated from Nashville and other Tennessee institutions who will be particularly interested in this announcement.

Dr. Siegfried B. Bieker of St. Petersburg passed away January 11th. The cause of his death was cerebral hemorrhage. Dr. Bieker came to St. Petersburg from Alabama about five years ago and had offices in the Power and Light Building, specializing in urology. He received his medical education in Northwestern University. He is survived by his wife, Dr. Annette M. Bieker, who was associated with him in practice.

The many friends of Dr. Charles L. Jennings of Jacksonville will be interested to learn of his marriage to Miss Mattie Norris of Crossville, Tenn., which occurred Christmas day at Nogales, Sonora, Mexico. Dr. and Mrs. Jennings have returned home and are residing at 805 Lomax St., Jacksonville.

* * *

Dr. Gordon Stanton of Hastings recently suffered severe injuries as a result of a head-on automobile collision.

* * *

The following was omitted in the publication of the Proceedings of the Fifty-Sixth Annual Meeting of the Florida Medical Association in the April, 1929, issue of the Journal: "On motion, the House of Delegates authorized the Treasurer of the Florida Medical Association to provide up to $5,000.00 for the Legislative Committee, if needed in their efforts to pass a Basic Science bill."

Dr. E. W. Macchtle, formerly of Tampa, recently moved to Chicago. He is engaged in a research problem in neurology at Northwestern Medical School, which he anticipates will take two or three years.

* * *

Dr. W. M. Goodson of Miami announces the removal of his offices from 15 N. E. 11th St. to 315 Olympia Building.

* * *

Dr. J. M. Irwin was recently elected City Health Officer of St. Augustine, succeeding Dr. Edgar Estes, resigned.

* * *

Dr. and Mrs. E. W. Veal of South Jacksonville were recently called to South Georgia owing to the illness of the former's mother.

* * *

Dr. Henry Hanson, State Health Officer, and Dr. F. A. Brink, Director of the Bureau of Communicable Diseases of the State Board of Health, were in Gainesville on January 30th, to discuss the question of the early diagnosis of tuberculosis with the local health council. On the 20th of January, the State Board of Health, represented by the State Health Officer, the Directors of the Bureau of Communicable Diseases and the Bureau of Sanitary Engineering presented the result of a sanitary survey for Leon County and the City of Tallahassee, together with the recommendation that a full-time city and county health unit be established.

* * *

Dr. Ralph N. Greene of Jacksonville recently visited Miami, making the trip from Jacksonville in his Waco plane. He was accompanied by his brother, Major Loren Greene of the medical corps of the U. S. army.

* * *

Dr. and Mrs. J. N. Fogarty of Daytona Beach attended the opening of the Ponce de Leon Hotel at St. Augustine, January 5th.

* * *

Dr. Eugene C. Lowe of Key West has recently moved to Miami where he will practice his profession.

* * *

Dr. and Mrs. J. L. Boone of Jacksonville spent the Christmas holidays in Tallahassee with the latter's father, Dr. Edward Conradi.

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		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	Don S. Fraser, M.D., Panama City.					27%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	
Columbia.....	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		64%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	
DeSoto-Hardee-Highlands ...	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton	R. A. Barnett, M.D., White Springs.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	20%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden-Liberty-Wakulla-Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco-Hernando-Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	
St. Johns	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeechobee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	15%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
Washington-Holmes	W. C. Harper, M.D., Chipley.					

NOTE—Secretaries: Please submit information to complete the above schedule.

Dr. W. H. Taylor, formerly of Daytona Beach, recently moved to Chicago. His address is 6553 Harvard Avenue.

* * *

Dr. W. B. Guy of St. Augustine recently returned from an extended trip to the Orient and England.

* * *

Dr. C. E. Tumlin of Miami has moved his clinic to 350 Olympia Building. Associated with Dr. Tumlin are Drs. W. M. Goodson and W. H. Ellis.

* * *

Dr. L. L. Andrews of Orlando, director of the Orlando-Florida Sanitarium, recently returned from Atlanta where he attended the meeting of the American College of Surgeons.

* * *

Dr. W. J. Buck of Belle Glade was recently elected commander of the American Legion Everglades Post No. 20.

* * *

Dr. Wm. A. Oughterson, formerly of West Palm Beach, has moved to 2054 E. 90th St., Cleveland, Ohio.

* * *

Dr. Harold D. Van Schaick was recently elected head of the department of surgery at St. Luke's Hospital, Jacksonville.

* * *

Dr. John Boyd of Jacksonville was recently appointed by Dr. Henry C. Dozier, president of the Florida Medical Association, to represent the Association on the Executive Committee of the Florida Public Health Council which met in Jacksonville on February 12th.

* * *

The Jackson County Medical Society recently held its annual election of officers, which resulted as follows: Dr. W. C. Box, Graceville, president; Dr. D. A. McKinnon, Marianna, vice-president; and Dr. C. H. Harrison, Cottondale, secretary-treasurer. Dr. M. Q. Burns of Blountstown was elected delegate to the annual meeting of the Florida Medical Association, with Dr. J. B. Dowling of Alliance as alternate. The following members were elected to the Board of Censors of the Society: Dr. N. A. Baltzell, Marianna, one year; Dr. R. L. Kennedy, Malone, two years, and Dr. T. H. Hudgens, Sneads, three years.

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A smoker was held by the Duval County Medical Society recently. Dr. Guy L. Hunner of Johns Hopkins was guest of honor and the principal speaker of the evening. He chose as his subject "Ureteral Strictures." The members of the Society honored Dr. Hunner by a large attendance. A number of out-of-town guests were also present.

* * *

The Suwannee River Medical Society held its annual election of officers on December 13th at Madison. Dr. Geo. O. Davis of Madison was elected president; Dr. R. B. Harkness of Lake City, first vice-president; Dr. H. M. Strickland of Live Oak, second vice-president, and Dr. Eustace Long of Madison, secretary-treasurer. After the business meeting, a social program was enjoyed.

* * *

The building located at 1022 Park St., Jacksonville, formerly known as the "Wade Building," has been renamed the "Medical Arts Building," inasmuch as it is given over almost entirely to medical offices.

* * *

The Rockefeller Foundation has given $500,000 to Yale University, New Haven, Conn., which will be used to establish a laboratory station on a 200-acre tract at Orange Park, Florida, for the breeding and scientific study of anthropoid apes. A special laboratory will be built in which will be made a detailed observation of the habits, social relations, life history and psychobiologic development of the chimpanzee, the gorilla, the orangutan and the gibbon. It is thought the exhaustive studies of anthropoids will be of great importance in connection with the program of the Institute of Human Relations at Yale. The studies will include problems in physiology, behavioral adaptivity, mental defects and diseases among the apes, and it will be under the general supervision of Robert M. Yerkes, Ph.D., who has been at work at Yale for five years on comparative psychobiology. There will be an advisory council including representatives of Yale and Edwin G. Conklin, Ph.D., Princeton University; Dr. Milton J. Greenman of the Wistar Institute, Philadelphia; Dr. Theobald Smith of the Rockefeller Institute; Clark Wissler, Ph.D., of the American Museum of Natural History, New York; Dr. H. Gideon Wells of the University of Chicago, and John C. Merriam, Ph.D., president of the Carnegie Institution of Washington.

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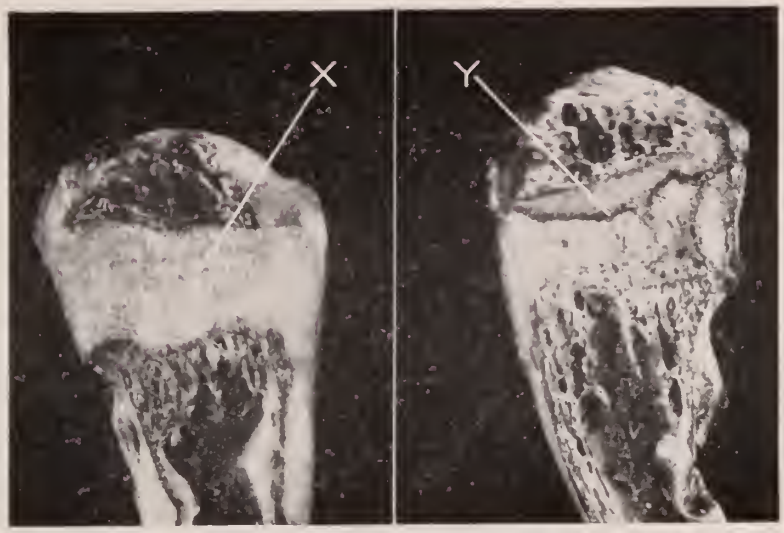
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Illustrating "Line Test" method of standardizing Vitamin D content. At left, the leg bone of a rachitic rat showing induced decalcification area (X). At right, healing has begun, as evidenced by initiation of recalcification at dark line (Y).

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To test for *vitamin A potency* the oil is given orally to young albino rats which have been fed on a diet free from vitamin A. We ascertain how much oil is needed daily to correct the induced typical eye condition (xerophthalmia) and to institute a specified rate of growth. The daily minimum amount of oil required to bring about this change constitutes one vitamin A unit.

Every lot of Parke-Davis Standardized Cod-liver Oil must contain not less than 13,500 units of vitamin A in each fluid ounce.

In determining *vitamin D potency* we use our quantitative adaptation of the "line test" technique of McCollum, Simmonds, Shipley, and Park. The oil is fed to young rats in which rickets has been induced. We measure the minimum amount of oil required per day over a period of ten days to initiate recalcification in the leg bones. This amount represents one vitamin D unit. Each fluid ounce of Parke-Davis Standardized Cod-liver Oil contains not less than 3000 vitamin D units.



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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION



THE first clear differentiation between the bovine and human types of tubercle bacillus was made in 1898 by Theobald Smith. When it became evident that the bovine tubercle bacillus may be conveyed to the human through the drinking of milk, the sanitary control of this important food was demanded. Pasteurization and the gradual but steady elimination of tuberculous cows have undoubtedly been factors in reducing tuberculosis, particularly the osseous and lymph glandular forms commonly seen in children. In England, the problem seems to be more difficult and unyielding than it is in the United States, according to William G. Savage, health officer of Somerset, from whose book, "The Prevention of Human Tuberculosis of Bovine Origin," most of the following information is abstracted.

HUMAN TUBERCULOSIS OF BOVINE ORIGIN

There is little statistical evidence to prove the direct relationship between the extent of bovine tuberculosis among cattle and the incidence of human tuberculosis of bovine origin. Satisfying studies of this kind are obviously difficult to make, and those that have been made are inconclusive.

PREVALENCE OF DISEASE

The exact prevalence of bovine tuberculosis among humans is not easy to determine. It is impossible to decide by clinical means whether a given case is of human or bovine origin, although the organism may, by a somewhat laborious bacteriological procedure, be isolated and identified. Several bacteriologists have undertaken studies of this kind, and their total number, while not large, is enough on which to form an estimate of the percentage of bovine tuberculosis. On the basis of these studies, Savage arrives at the conclusion that 1% of the respiratory and 23% of

(*Continued on page* 380)

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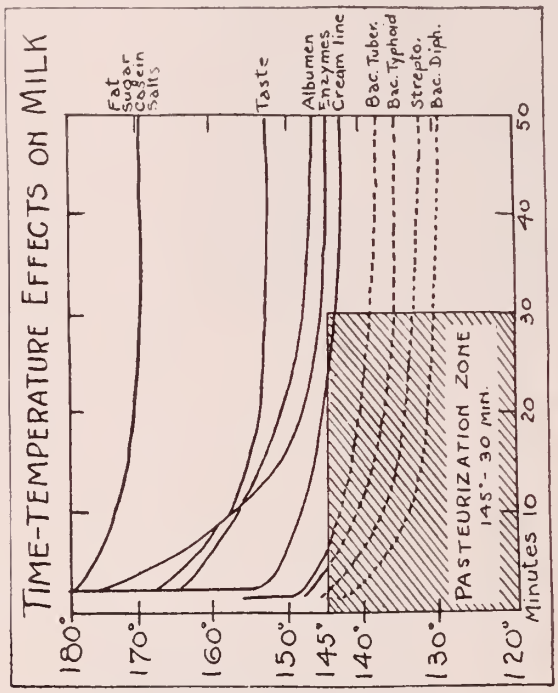
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non-respiratory cases in England are of bovine origin. From this, he calculates that in 1927 a total of 310 cases of respiratory and 1,635 cases of non-respiratory tuberculosis which ended in death were of bovine origin. Moreover, the cases not ending in death, while not ascertainable, must be considerable, and responsible for a vast quantity of suffering.

EXTENT IN UNITED STATES

In the United States, Park and Krumwiede studied in 1910 the bacteriological origin of 435 cases of tuberculosis. About 7% of the entire group (all ages) were of the bovine type. However, of the group under five years of age, about one-third were of bovine origin, and slightly over half of these were involvements of the cervical glands. Subsequent to that study, New York City adopted the practice of pasteurizing all milk supplies, with the exception of about 1.5% which was certified. This did not apparently affect the incidence of pulmonary tuberculosis among children, but the percentage of cervical cases of bovine origin was reduced to less than half its previous figure.



METHOD OF TRANSFER

Human tuberculosis of bovine origin may nearly all be charged to the use of milk containing living tubercle bacilli, though cream, butter

(*Continued on page 382*)



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and cheese cannot be altogether ignored. The milk is infected usually from the lesions on the udder, though contamination of milk from feces containing excreted tubercle bacilli is also common. Every cow that reacts positively to the tuberculin test should, therefore, be regarded as a potential source of infection, for both human beings and cows.

CONTROL OF BOVINE TUBERCULOSIS

Methods for dealing with the problem in the United States are primarily two-fold; the eradication of the disease among cattle by slaughtering positive tuberculin reactors and the pasteurization of milk. The Federal Department of Agriculture, through the various state bureaus and departments of animal industry, has pursued with vigor its policy of "cleaning" herds and accrediting those free from the disease. While there are many practical difficulties in the way and the cost in terms of subsidies for slaughtered cattle is expensive, the percentage of infected cows is gradually lessening.

The practice of "designating" or certifying certain milk will probably never be practicable on a wide scale because of the difficulty of adequate, reliable inspection. Nor does certification take sufficiently into account possibilities of infection other than tuberculosis, such as scarlet fever, septic sore throat and typhoid fever. Recently, cases of undulent fever have been reported as having been acquired from accredited herds free from tuberculosis.

HEAT TREATMENT OF MILK

Pasteurization admittedly has its failings. Machinery and methods have been perfected to a high degree of efficiency, but the human factor frequently fails, and this can be controlled or supervised only with great difficulty. Moreover, standards regulating the process vary widely according to communities; pasteurization may mean something entirely different in one city than it does in another. However, efforts are now being made by the U. S. Public Health Service to restore order out of chaos. With the aid of leading state health officers, the Service has drafted a Standard Milk Ordinance, suitable for adoption by municipalities. The particular advantage of the ordinance is that it defines clearly the many commercial and technical terms involved in milk production methods. Pasteuriza-

(*Continued on page* 384)



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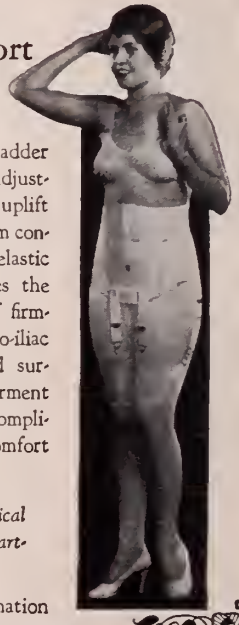
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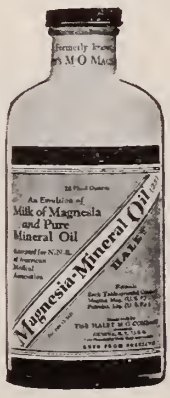
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tion, it states, "shall be taken to refer to the process of heating every particle of milk or milk products to a temperature of not less than 145 degrees Fahrenheit, and holding at such temperature for not less than 30 minutes in pasteurization apparatus approved by the health officer, the temperature and time being automatically recorded by a temperature and time recording device approved by the health officer."

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Milk properly pasteurized is not injured as a food to any appreciable extent. Apparently, Vitamins A and B are not affected, Vitamin C is reduced in amount, and little is known as to the fate of Vitamin D. This slight loss of vitamin content may be restored in a child's feeding by the addition of a small quantity of fruit juice.

How heat at given periods of time affects the food constituents and qualities of milk, as well as certain common bacteria which may contaminate milk, is indicated in the chart.

According to the author, the American method of dealing with bovine tuberculosis is not applicable in England because the dairy business is organized on a much more haphazard and decentralized basis, making supervision almost impossible, and also because the slaughter of some 40% of the dairy cattle (which would be necessary) would impoverish the state and also cause a milk famine. He suggests a practical but elaborate plan of gradually cleaning the herds. Space forbids discussion of details, which seem sound and workable.

Apparently assuming that the general practice of pasteurization would be too readily seized upon as a substitute for the more radical measure of eliminating tuberculosis among cattle, the author of the proposed English plan minimizes the value of pasteurization and speaks of it as "a confession of failure." With this feeling, American sanitarians would surely not agree. Clean milk regulations have not discouraged the campaign to free cattle from tuberculosis; that being a worthy object in itself, viewed purely from an economic standpoint. Pasteurization is not advocated as a means of making dirty milk clean. The ideal is to produce milk as clean as possible and to supplement this by heat treatment. The possibilities of contaminating this food product in its devious trip to the consumer are numerous; and pasteurization is but an added protection against tuberculosis, as well as many other dangerous infections.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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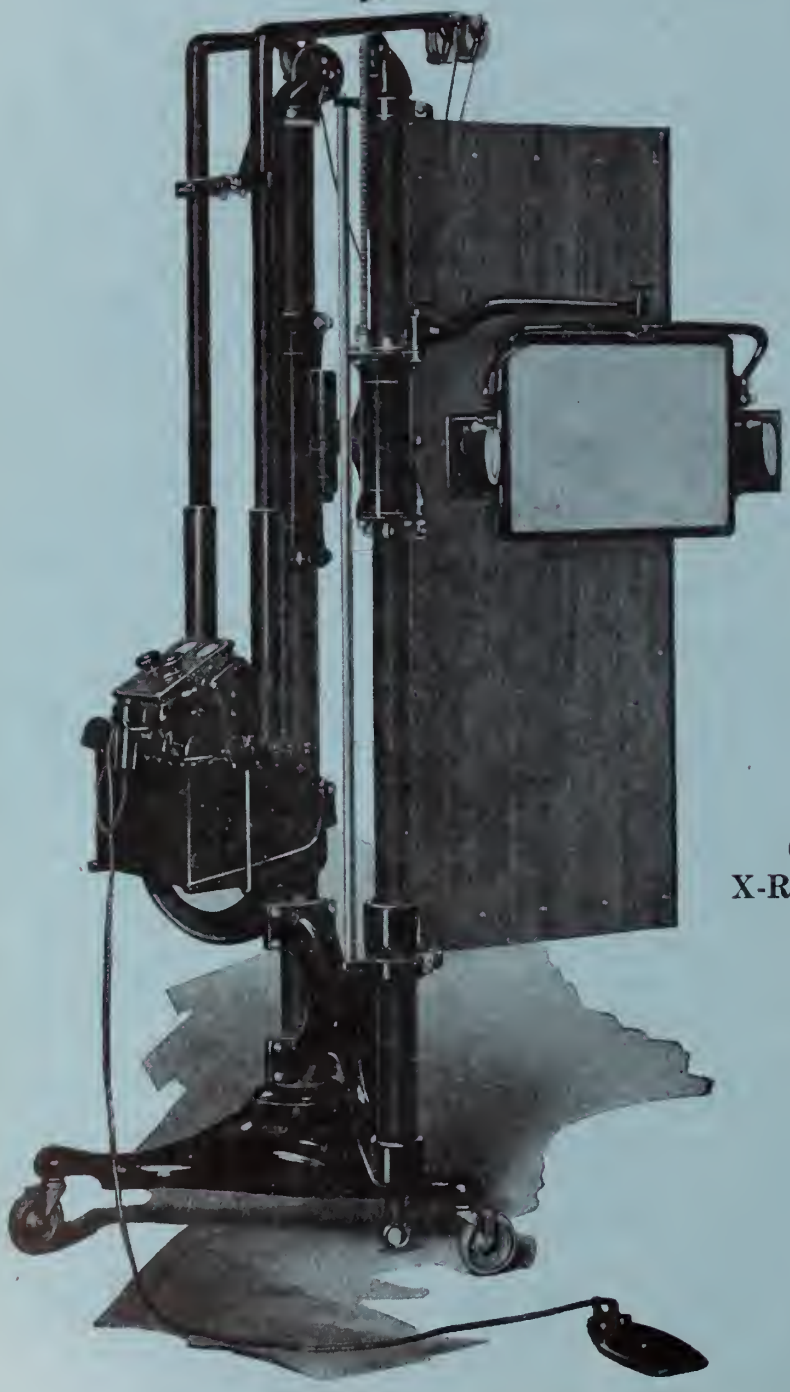
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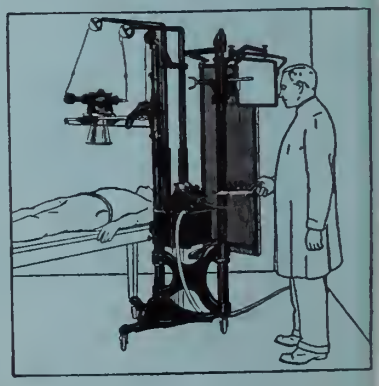
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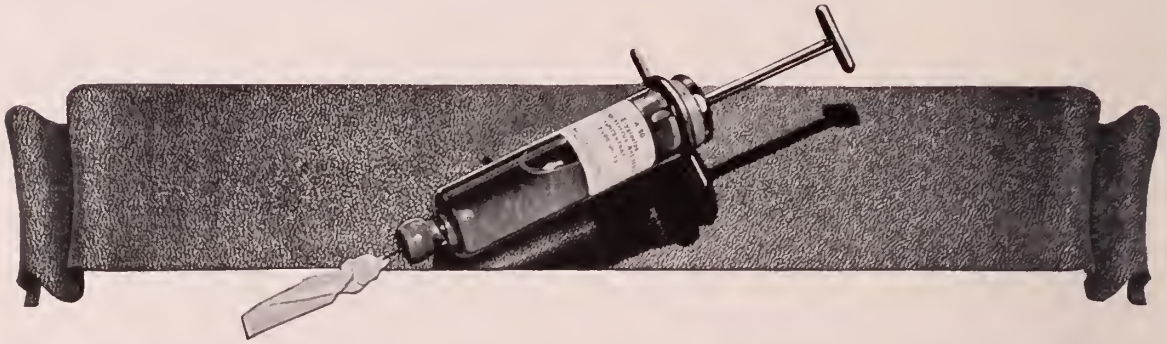
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THE PROBLEM OF INSECT-BORNE DISEASES IN SOUTH AMERICA*

HENRY HANSON, A.B., M.A., M.D.,
Jacksonville.

South America lies between 12 degrees north latitude and 56 degrees south latitude, and is a pear-shaped continent with, by far, its largest area lying within the tropics.

The Tropic of Capricorn crosses the continent from west to east, passing through about the midpoint of the northern ¼ of Chile, through the northern portion of the Republic of Argentine, through Paraguay about on a line between the northern and middle third of that country and through the southern 1/7th of Brazil. It will therefore be seen that we have Bolivia, Peru, Ecuador, Colombia, Venezuela, the Guianas, (British, Dutch and French) and almost all of Brazil lying wholly within the zone between the tropics of Cancer and Capricorn, or 11/14ths of the entire continent purely tropical, with about 2/14ths subtropical and the remainder in the temperate zone. As a result "the average temperature of the intertropical region is over 80 degrees F." (N. L. L. Encyclopedia, Vol. 11, page 319.) The west coast is an exception to this, however, because there the average isotherm of 70 degrees reaches as far north as 10 degrees s., due to the cold Humbolt Current which flows north along the coast of Peru. This does not extend very far inland to the east due to the fact that the Andes Mountains which lie close to the Pacific form a barrier preventing any modulating influence of ocean currents extending more than a few miles eastward, or to the foothills of these mountains.

The rainfall in South America is a varying quantity, and ranges from about 1½ inches about Lima to over 160 inches in the Amazon basin. There are a number of smaller areas like the Atrato River Valley in Colombia, etc., where there is a very heavy rainfall. As the rainfall increases, the insect life also increases together with the various diseases which they convey. Still, both the rainfall and the heat are much exaggerated in the average popular tales regarding these countries.

*Read before the Woodbury County Medical Society, September, 1927.

In this address no attempt will be made to make any complete detailed study of the insect-borne diseases of South America, since it is quite evident that such an effort would require a volume. While much is known, and a great deal of work has been done, in each of them there still remains an almost endless amount to be done in both the medical and entomological line in connection with the working out of prevailing health conditions.

Probably the greatest impetus which has been given to the study of tropical diseases is that of the construction of the Panama Canal when the Government found that it was first necessary to dominate some of the commoner insect-borne diseases before they could do economical and effective work. To illustrate, I will cite the conditions in the Canal Zone in 1906, when the malaria admission rate to the hospital was 821 per 1000 employees (11 out of 13) as compared with 7 per 1000 employees in 1918, within the sanitated areas in the Zone.

In Colombia, soon after the Tropical Oil Co. extended its operations into the jungle into the worst malaria section in the Magdelena valley, it had a record of 1,500 admissions per 1000 employees.* Two years later, the Chief Surgeon for the Company told me that this rate had been reduced to 250 per 1000 employees.

The two outstanding insect-borne diseases of the tropics are malaria and yellow fever, the former transmitted by the Anophelene mosquito, the most important of which is the *A. albimanus*. The other Anophelenes proven to be malaria carriers in the tropics are the following: *A. argyritarsus, A. tarsimaculata, A. Pseudopunctipennis.* The other species were not proven to be carriers, according to the experiments of Dr. S. T. Darling. Yellow fever is transmitted, in the Americas, exclusively by the *Aedes aegypti, Linn.* This mosquito was formerly known as the *A. calopus, Stegomyia calopus, Stegomyia fasciata*, and by a number of other synonyms. In the Canal Zone, both of these diseases were dominated by attacking their breeding places. The yellow fever was first to yield due to the fact that *Aegypti (Stego-*

*The 1,500 admissions per 1,000 employees came about due to several having 2 or 3 attacks during same year.

myia) mosquitoes had a less extensive breeding ground. They breed only in artificial containers such as cisterns, wells, barrels, tanks, earthenware, or any other type of container which is closely associated with human beings. This mosquito is altogether a domestic one and is always found within or immediately adjacent to human habitation. The problem of its destruction was therefore simple as compared with that of the malaria bearing mosquito, the Anophelene, which breeds in any comparatively fresh standing water, in swamps, along the edges of rivers or ponds, in pools or seepage outcrops along the hillsides, and to a very limited extent in artificial containers. Although the control of malaria by attacking the breeding places is very expensive, it was the method most relied upon and is the one which is keeping the sanitated areas practically free from the disease at the present time. Screening of houses and the administration of prophylactic quinine are secondary in importance. This applies where density of population and funds available make anti-larval measures possible and practicable.

Briefly, it might be stated that the yellow fever mosquito was sufficiently reduced to stop the propagation of yellow fever, by, where possible, doing away with its breeding places, *i. e.,* removing the necessity for storing water by the establishment of an ample supply of running water, a piped supply to each home. Where this could not be done, the containers were covered, with the idea of not permitting the female mosquito access to the container where she could lay her eggs and propagate. Again where the above methods could not be put into practice, the containers would be emptied once or twice each week (the cycle of development of these mosquitoes is from six to about 12 days, depending on the temperature and food element in the water), and in the early days fumigation for the destruction of the adults was practiced, but later abandoned as it was expensive and not yielding appropriate results. Finally, control by the distribution of a larvacidal fish was tried, and first used on a large scale by Dr. M. E. Connor in Guayaquil, and by a number of others in other Central and South American countries. It had never been used as generally or on as large a scale as it was used by the writer on the west coast of Peru in 1921 and 1922, where an accurate record was kept of the distribution of over 857,000, in more than 70 of the principal towns on the Peruvian coast.

The malaria mosquito is controlled by ditching wet areas, by "training" sluggish streams, and by laying subsoil tile to intercept seepage outcropping near the bottom of hillsides, in addition to the more temporary work of spreading oil on pools of stagnant water where Anopheles mosquitoes might breed.

On the west coast of South America the next important insect-borne disease (though not a purely tropical one) is bubonic plague, which is transmitted principally by the rat flea (Xenopsylla cheopis) from the rat to man. This is a very serious sanitary problem not only to South America, but almost equally so to Central and North America, and to the entire world in general.

During the course of the campaign for the eradication of yellow fever from Colombia, we had an interesting experience with relapsing fever, which is a disease quite common in Colombia, western Venezuela and Panama, also throughout Central America and Mexico. The Panamanian, Colombian and Venezuelan relapsing fever is caused by apparently the same spirochete, the *Spirochaeta neotropicalis* (Bates), and the *Spirochaeta venezuelensi* (Tejera), and transmitted by a tick, the *Ornothodorus venezuelensi,* (Tejera and Brumpt). This tick was formerly thought to be the *Ornothodorus talaje* but will be reclassified by L. H. Dunn, the entomologist in the recent yellow fever campaigns mentioned above. This tick has the same habits as the common bedbug, is found in wooden beds, the native beds made from split bamboo, and in cracks in the walls and in the holes in the adobe walls of the huts occupied by people of the poorer classes throughout these countries. This tick comes out to feed at night much the same as the bedbug, and as soon as it has its fill of blood lets go and returns to its crack or hole in the wall. It is very long-lived even without access to any food. During the survey in Colombia, we kept a number of these ticks in sealed containers more than six months, after which time the entomologist, L. H. Dunn, injected three of those still living (after macerating them in salt solution) into white rats and recovered the Spirochaeta neotropicales.

This tick, *O. venezuelensis,* was proven to be the carrier of *Spirochaeta neotropicalis* (Bates), of relapsing fever in a series of experiments, by Bates, Dunn and St. John (A. J. Tr. Medicine, 1:183, 1921), in which soldier volunteers were used in the same manner as those in which the transmission of yellow fever was proven in Cuba.

The American relapsing fever even though rarely fatal is of considerable importance to the traveler, more especially to those who have traveling of the type assigned to the representatives of the Singer Sewing Machine Company, who visit practically every remote village of the country, or countries of Central and South America.

The fever is also sometimes confused with mild cases of yellow fever, during the first few days of the disease, and it also happens that it is not infrequently diagnosed as malaria. I felt quite certain that many of the so-called non-yielding cases of malaria were relapsing fever because I was told that these cases would yield promptly to one or two injections of neosalvarsan which is specific for relapsing fever.

Another disease of which we saw a great deal in Colombia, was yaws, or framboesia, or pian, which occurred in the greatest numbers in the section where we found the most ticks of the species *O. venezuelensi*. The natives in this section were quite convinced that yaws resulted from or followed bites by these ticks, which they designated by a variety of local names. It was amusing to note how their antipathy to Panama came out in connection with their localisms. The ticks they would designate by "chinche Colombiano" but the ill-smelling bedbug was not recognized as a Colombian species but was called "chinche Panamania." Dunn made some attempts to infect ticks from cases of yaws but obtained negative results. The experiments, however, were too few to be conclusive. It is quite possible that some insect of this type is an important factor in the spread of this very prevalent disease. It is due to a *Treponema pertenue* (Castellani).

Elephantiasis, Filariasis (due to F. bancrofti, F. perstans, F. demarqui), with the Culex fatigans, as the chief host for F. bancrofti, many cases of which were seen in various parts of Colombia and Venezuela is a rather disquieting menace to the traveler in this section of the tropics. Connor, who recently made a yellow fever survey in the Guianas, stated that in some parts of British Guiana as high as 70% or 80% of the population were infected and showed active manifestations of the disease.

Among the other diseases seen, the most common was leprosy, the transmission of which is still problematic. Many of the South American physicians believe that biting insects play an important part.

REVIEW AND OBSERVATION OF ONE CASE OF HYDROPHOBIA

Carol C. Webb, M.D.,
Pensacola.

The chance for a physician to have an opportunity to examine and observe the uncontrollable symptoms of hydrophobia is indeed slight, within the scope of his lifetime, and I assure you that there is no recompense for this privilege, if it be one.

Osler, writing on this subject, which has the names of hydrophobia, rabies, or lyssa, defines it as "an acute disease of a warm-blooded animal dependent upon a virus, which is communicated by inoculation to man."

The disease is variously distributed throughout the world, but in England there has not been a single death from it since 1903, when the universal muzzling edict was set forth and rigidly enforced.

Etiologically, we know dogs are especially liable to the disease and the virus is contained chiefly in the nervous system, and met with in some secretions, especially the saliva. Bartarelli has shown that it reaches the dog's salivary glands by way of the nerves, and not by the blood vessels.

Incubation is variable from two weeks to three months, but depends upon the age, as children have a shorter elapsed time than adults; also, the proximity of the part infected to the brain centers, as the face is probably the most severe, with hands next, and then the parts of the body that are usually covered, when bitten, with clothing; the extent and severity of the wound, as it seems that puncture wounds are the most severe, while open wounds are less apt to admit the virus. One authority believes that not more than 15% of all those bitten by rabid dogs become affected with the disease even though the Pasteur treatment not be given.

Three stages of the disease are noted in the symptomatology—first the premonitory stage, in which the tissue about the bite becomes irritated, painful and numb. Melancholia and depression follow, with severe headache, anorexia, insomnia, irritability, increased sensibility to light, fever. Increase of pulse rate, and difficult swallowing accompany this stage.

The second stage, or that of excitement, shows marked excitability, restlessness, extreme hyper-

aesthesia, spasm of the muscles of the larynx and mouth. "Any attempt to take water is followed by an intensely painful spasm of the muscles of the larynx, and the elevators of the hyoid bone," and it is this that makes the patient dread the very sight of water. Maniacal symptoms may be intervened with quiet stages with the mind unimpaired. Temperature may be from 100 to 103 degrees F. The patient rarely attempts to injure attendants, and even in the intense spasms, may be very anxious to avoid hurting anyone. Odd sounds are sometimes noted, and this stage may last from 1 to 3 days.

The third, or paralytic stage, may last from 6 to 18 hours. The spasms no longer occur, the patient becomes quiet, unconsciousness gradually supervenes, the heart's action becomes weak, and death is by syncope.

After this textbook review I beg to present the following case of hydrophobia, which I observed at the Pensacola Hospital.

Early in the afternoon of the 14th of January, a negro section laborer, of the Frisco Railroad, living at Muscogee, Florida, and 33 years of age, presented himself at my office attended by four negroes. His chief complaint was that he was feeling queer, and that he had a numbness and tenderness in the right hand, forearm, arm, and shoulder. Upon examination, motion was unimpaired, and sensation was apparently normal, but several small scars were noted on the index and middle finger of the right hand. He informed me that a dog had bitten him about the fifteenth of what was probably the month of November; that the dog was killed because of its vicious nature, but as far as he knew, the head was never examined. He was sent home under observation, only to return the following afternoon with the same number of excited negroes attending him. They said he was no better and was acting queerly and insisting that he was not as good a man as he used to be physically. His head hung in a very listless manner and he walked with an awkward shuffling gait. His hand and arm pain was more marked and his right hand was swollen; the skin was hot and dry. He was referred to the Pensacola Hospital at 3 p. m. January 15th, and isolated. His temperature on admission was 101, pulse 98, and respiration 26 per minute.

He was prepared for a bath by the attendant and at that time showed a marked fear of water, and remarked that he had had a "spell" that morning when he attempted to wash his face. He was quite reasonable throughout the day and night, only asking that something be done for him, and to give him something to relieve his pain. A dose of bromo-choral compound was given after much persuasion, and difficult swallowing resulted. He answered questions calmly, but when conversation was prolonged, he talked loudly and with increasing difficulty. He was given a swallow or two of water on the next morning, and although the craving for it was intense, he was almost completely strangled with convulsive spasms of the larynx. His symptoms became more and more exaggerated and he was finally out of bed on the floor, and at this time it was noted that the right upper extremity was completely paralyzed and there were definite groups of extensors, abductors, flexors of the right lower extremity involved. Morphine, in one-half grain doses, was of no avail, so he was placed under a restraining sheet about twenty hours after his admission.

The last twelve hours of his life were marked by noises, queer sounds, raving, pleading, and prayers, with an almost constant expectoration of thick, frothy, tenacious salivary secretions of large quantity, which accumulated in the mouth, nose and throat. His symptoms gradually subsided; he became quiet; the spasms ceased; unconsciousness supervened; and he died fifty-nine hours after he first visited my office.

An autopsy was obtained and the brain was removed, sections were taken from the cerebellum, medulla and cerebral cortex and smears were made from the pons. Search was made for punctate hemorrhages, but they were not demonstrated.

Our pathologist, Dr. J. M. Hoffman, has satisfactorily shown at the staff meeting of the Pensacola Hospital, Negri bodies in the tissue submitted from the autopsy, thereby confirming the diagnosis of hydrophobia.

TULAREMIA

Report of a Case in Seminole County

C. J. Marshall, M.D.,
Sanford.

There is probably no other disease that has aroused as much interest in the past year or two as has this one, which derived its name from Tulare County, California, because it was first extensively studied there, by McCoy, of the Public Health Service, several years ago, during an active campaign instituted by the health authorities on the Pacific Coast, on account of the threatened outbreak of bubonic plague.

Due credit should also be given to Pearse, of Brigham City, Utah, who, as early as 1910 described a local outbreak of a disease there, characterized by a painful bubo in the region of an infected insect bite. The process was accompanied by a fever of a septic type, lasting from three to six weeks, associated with great prostration, followed by slow convalescence. Subsequent investigations have shown that the disease is due to an organism, Bacillus Tularense, closely allied to the bacillus of bubonic plague.

Tularemia can no longer be regarded as a rare disease of man. Up to 1924, only 15 cases had been reported, but in the last four years, over 800 cases have been recognized in the United States; cases have been reported from every state in the Union, with the exception of the New England States, Delaware, and the state of Washington. During a period of one and a half years, Dr. Walter M. Simpson discovered 61 cases in Dayton, Ohio. Thirty-two of the Dayton patients acquired the disease during the "rabbit season" of 1927-28. The disease has been elucidated by American investigators alone, but it is prevalent as well in Japan and Russia, over 1,000 cases having been recently discovered in Russia. It has been found to exist in nature among sheep, muskrats, opossums, water rats and game birds, and there are a large number of insect vectors to convey it to man.

The disease affects man secondarily as a result of direct contact with the tissues or body fluids of an infected animal, or as the result of indirect transmission from animal to man by certain ticks, fleas or flies. It has a mortality of 4%, a very slow convalescence in a great many cases, and the occurrence of superative or granulomatous late lesions, with the attendant prostration and debility, emphasize the seriousness of the condition.

Tularemia in man has been classified by Francis into four general types, as follows:

1. The ulcero-glandular, in which a papule at the site of infection later becomes an ulcer, and there is involvement of the regional lymph glands.

2. The oculo-glandular, in which the primary lesion is a conjunctivitis, and is accompanied by enlargement of the regional lymph glands.

3. The glandular type, without noticeable primary lesion, but with enlargement of the regional lymph glands.

4. The typhoidal type, which occurs without primary lesion, and without glandular enlargements.

The average incubation period is 3 days, but the majority have an incubation period of 24 hours. The onset is usually sudden, with headache, vomiting, chilliness or chills, aching bodily pains, sweating, prostration and fever. These are most noticed during the active stage of the disease, which lasts from 2 to 3 weeks. Convalescence is slow, it being usually several months before a patient entirely returns to normal. There is usually a history of having dressed or cut up a rabbit, or of having been tick- or fly-bitten. There is, usually, however, an immunity acquired by recovered cases, which lasts a great many years, and protects from further attacks.

As yet, no specific treatment has been developed; the treatment is essentially symptomatic. Strict confinement to bed is the most important measure. It is useless to incise the primary lesion, and it is unwise to excise, or even to incise the regional lymph nodes, until definite suppuration is present. There is no evidence that any intravenous therapy has altered the course of the disease in any way.

Investigations are now under way in regard to the value of immune serum in the treatment of the condition.

With this outline, I will now proceed to the presentation of a case.

Mrs. J. O. A., aged 51 years, white, married, came into my office on October 21, 1929, complaining of an infected forefinger on the left hand. There was a history of having dressed a rabbit three days previously, and having accidentally cut the skin on the finger with the knife

while dressing the rabbit. The finger and hand were quite swollen and painful; lymphatic glands at elbow also enlarged and tender; red streaks up the forearm, and starting above the elbow; axillary glands not enlarged, as yet. Patient stated that she had washed her hand carefully after the injury, and had used mercurochrome locally. I immediately gave the hand a dose of X-ray, such as usually inhibits and localizes infections of that type. I dressed the hand with iodex, painted the forearm and arm with iodine, and asked the patient to report the next day, at which time I made a deep incision over the distal phalanx, at which the original lesion occurred. Failed to locate any pus, however, even with a probe. Dressed again with iodex, and advised rest in bed, with constant applications of hot magnesium sulphate fomentations, continuously.

At this time the patient began to complain of an intensely sore mouth and gums, anorexia, prostration, and septic chills and sweats; she was given laxatives, antipyretics, a metaphen and peroxide solution as a mouth wash, and small doses of milk of magnesia every four hours. The hot magnesium sulphate fomentations were kept up constantly, and on October 26th I made many multiple punctures on both the dorsal and ventral aspect of the finger, over each phalanx, still failing to get any appreciable amount of pus. On the 29th, however, fluctuation was found on the inner aspect of the proximal phalanx, and I made a free incision, passing a grooved director through and through the finger.

In the meantime the swelling in the hand had begun to subside, except along the metacarpal bone of the index finger; two days later I made another incision opposite the head of this metacarpal, and got a very little pus.

The patient remained in bed, and very much prostrated, until November 7th, on which day she was sufficiently improved to be brought to the office, so that I could make an X-ray picture of the hand. This showed surprisingly little involvement of the phalanges, although there was a little notch of erosion on the proximal phalanx, inner aspect, opposite the site where I had made the through-and-through incision.

After that, the patient came daily to the office for a dressing in the morning, and did a similar dressing at home at night. I used a metaphen solution, injected into the multiple punctures with a medicine dropper, each day, following with mercurochrome applied in the same manner, and covering the finger with gauze, using iodex to prevent undue adherence of the gauze. The glands on elbow and in axilla were treated with iodex and iodine applications, but were still tender and palpable. The stomatitis disappeared, and the patient gained in strength.

By November 25th, osteo-myelitis of the proximal phalanx had developed until it was evident even to the patient that amputation was indicated, and this was done, at the upper third of the first metacarpal, so as to be well above the infected area. Drainage was left, and the wound allowed to heal by granulation, which progressed normally.

The most marked feature of the case was the marked prostration, typhoid type of febrile symptoms, involving the digestive tract, and the very slow convalescence. The incisions made in the early part of the case were apparently useless, as no pus was found, and no benefit derived therefrom; possibly, even they may have been the means of secondary infection, resulting in osteomyelitis.

There is still (December 10th) enlargement of the glands at the elbow and in the axilla, but the patient is gaining steadily in strength, although the appetite is poor.

PREVENTIVE PEDIATRICS*

C. H. Farmer, M.D.,
Lakeland.

This paper is presented, not with the idea of bringing anything new or original to your attention, but with the hope of refreshing your minds on some points which have a vital bearing on the health and well-being of the infants and children you may be called upon to attend.

Far too often the new-born baby is considered, as some one has so aptly expressed it, "the by-product of obstetrics," and as soon as the cord has been cut by the attending physician the little fellow is turned over to the loving, but ignorant, care of the grandmother, neighbor, or midwife; and from this point on fights the never-ending battle against disease without the aid of trained medical care.

But, is the delivery room the first place where

*Read before the Polk County Medical Society at Lakeland, Wednesday, Dec. 11, 1929.

we should consider the health of the child? By all means, NO! Even though the mother should receive the first consideration and every care be given her during her pregnancy and confinement, we must not lose sight of the fact that there is another life at stake and another individual's health to be safeguarded. From the time, therefore, that the pregnant woman first puts herself under our care we should remember that every child has the right to be "well-born."

In a general way, accurate supervision of a woman during her pregnancy should provide the best insurance for a healthy baby at delivery. Let us review hurriedly, then, the care in the prenatal period.

We should make a careful history and physical examination. Search for systemic diseases and clear up focal infections. The pelvic organs should be thoroughly examined, and in primiparae, measurements of the bony pelvis taken. The cardio-renal system should be examined and its efficacy determined, remembering always that impairment of this system may start a child in this life below par.

Of course these patients should be seen at regular intervals during pregnancy, and these visits should serve to give the physician accurate knowledge of the progress of both mother and oncoming baby.

We should instruct these women about their routine of living and hygienic care. Exercise and rest should be regulated and they should be instructed about the importance of proper elimination. The diet should be well balanced and of simple food, making sure there is ample supply of vitamines B, C, and D, since these are not only necessary for the mother, but are of great importance to the developing child.

As the patient approaches term we should remember that she should be able to nurse her baby on its arrival. Her nipples should be treated so she will be able to stand the irritation of early nursing. Again, primipara should be shown how to massage and elongate the nipples so that the baby will be able to nurse.

Regardless of how irksome a case may be, or how tired the mother may be of her condition near the end of her term, we should never tamper with nature and start a woman in labor by the use of quinine, castor oil, or other artificial means, in the absence of pathological indications. A premature baby never has as good a chance as a full-term child and there are no normal mothers who will not go into labor when the natural time arrives.

At the time of delivery we are confronted with a number of things which have a bearing on the new-born child. Here, too, we should let nature take its course. By giving pituitrin we often get home to bed much earlier, but at the same time we often file a certificate for a still-born baby. Forceps often shorten a labor, but these same instruments often leave a defect that will be carried through life by the child. The administration of opiates often give the mother and the doctor a chance to rest, but they often make the resuscitation of the baby more difficult and depress the vital centers materially in the first few hours of life. We should remember always that intracranial hemorrhage and brain injuries occur in perfectly normal deliveries and that meddlesome obstetrics will not tend to lessen their occurrence.

Granting that the baby has had the advantage of intelligent pre-natal care, and a normal delivery, our problem then is to keep it in sound health and to fortify it against the inroads of disease.

There is no greater factor in this problem than that of proper diet, and the best diet for a growing baby is always breast milk. Milk from the mother's breast in sufficient quantity and at regular intervals is the greatest prophylactic measure for the young infant.

If for any reason breast milk is not available, the baby should be put on a well balanced formula of modified cow's milk or a reconstructed milk.

When it is necessary to artificially feed a baby we should always remember that this baby is more liable to develop some of the nutritional diseases than when breast fed. Orange or tomato juice added to the diet at about the sixth week will protect against scurvy and have a tendency to overcome constipation. Cod liver oil or ergosterol, together with sunshine, will prevent rickets. In this connection we should remember that sunshine alone is not sufficient for this protection.

Beginning about the third month, other foods should be added to the diet one at a time, beginning with small quantities and gradually increasing.

It is well to remember also that breast-fed babies should be weaned by the end of the first year. By following this rule we will often have

the child avoid the pitfalls of a low resistance, malnutrition, and anemia.

Considering the almost continuous activity of the growing child during its waking hours, we must recognize that rest is another element of supreme importance in the protection of its health. Sufficient regular sleep is an absolute necessity for the promotion of a child's health.

Although we have referred to it before we must again mention the health-giving, ultra-violet rays of the sunshine. This also constitutes one of the greatest aids in the promotion of the child's physical welfare. We should remember, however, that sunshine on the face and extremities alone is not sufficient, and that the whole of the child's body should be exposed for a period every day.

Dr. W. A. Mulharen has very aptly called these three: proper food, rest, and sunshine—the "Trinity of Health" for the child.

There are other prophylactic measures which are well to keep in mind and which should be given to the child when it begins to pass from the infant to the pre-school age, or the neglected age of childhood. We refer to the serums and vaccines: diphtheria toxin-antitoxin mixture, typhoid and smallpox vaccines.

The administration of these prophylactics is so simple and their efficacy is so well established that we cannot afford to fail to give the child its protection.

Of course there is some slight danger of a reaction from the foreign protein of toxin-antitoxin, but this is a minimum and should not give us concern provided we are prepared to meet this unusual emergency. Anyone administering a foreign protein should always have adrenalin ready for use.

In administering the smallpox vaccine, we should always be sure that the virus is fresh. The "Multiple Pressure," or "Leak Method" is the method of choice, since it gives more assurance of a "take" and less trouble during the reaction.

Some observers advise a reduction of the dose of the typhoid vaccine in proportion to the age of the child. Our experience has been that these little fellows react less severely to the usual dose than do adults. But regardless of the size of the dose we must remember that the child should be protected by the vaccine.

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MRS. FRANCES LONG TAYLOR

On January 8, 1930, Mrs. Frances Long Taylor died in Athens, Georgia. She was the daughter of Dr. Crawford W. Long, the first man to use ether for surgical anesthesia. This anesthetic was given March 30, 1842. Never before had any kind of inhalation anesthetic been administered. Surgeons had been forced to rely upon substances taken by mouth to lessen the pain of an operation. No one even hoped to prevent it. Anesthesia and asepsis are the foundations of modern surgery. Without the application of these two principles it would have been impossible to carry out the research which has made modern medicine one of the glories of our civilization. Georgia is justly proud of her illustrious son, Dr. C. W. Long, who proved the practical use of ether for inhalation anesthesia.

Dr. Long died in 1878. His daughter, Mrs. Taylor, devoted the greater part of her life to

proclaiming the deeds of her illustrious father. In 1928 she published an account of his life entitled "Crawford W. Long and the Discovery of Ether Anesthesia" (Paul B. Hoeber, Inc., New York). One cannot read this book without realizing something of the wonder of the man and the greatness of his epoch-making discovery. The book is written in a pleasing, simple style by one who adores the hero. No more fitting memorial could be left to Dr. Long than this charming record of his life and work.

Mrs. Taylor has achieved success. Her father is appreciated. Over the civilized world he is recognized to be the discoverer of inhalation anesthesia.

The medical profession in Florida joins with her sister profession of Georgia to mourn the passing of Mrs. Taylor. Our deepest sympathy goes to Dr. Long's surviving daughter, Miss Emma M. Long of Athens, Georgia.

STATE NEWS ITEMS

At the call of our president, Dr. Henry C. Dozier, the officers, committeemen and councilors met in joint session at the Mayflower Hotel, Jacksonville, Florida, March 6th. At this meeting councilors' reports were heard from eleven districts, all of which indicated considerable progress in the development of the various county medical societies. It will be noted by the roster which follows that many of the members made long trips in order to attend this meeting and their advice and counsel at this informal meeting were quite helpful in the discussion of pre-convention problems. Brief reports were made verbally by the chairmen of the different committees which have functioned during the interim. The program committee met officially preceding the pre-convention meeting and reported that applications for places on the scientific program had been reviewed and that twenty most excellent papers were selected which will constitute the scientific program at our annual meeting in Pensacola. The following officers, committeemen and councilors were present:

Dozier, H. C., President.....Jacksonville
Richardson, Shaler, Secretary-Treasurer....Jacksonville
Thompson, Stewart G., Business Manager..Jacksonville
Adamson, W. P. Tampa
Anderson, L. M. Lake City
Bates, T. H. Lake City
Boyd, J. E. Jacksonville
Carlton, Leland F. Tampa
Edwards, G. H. Orlando
Grace, W. H. Fort Myers
Greene, Ralph Jacksonville
Hanson, Henry Jacksonville
Henry, H. W. New Smyrna
Holden, Gerry Jacksonville
Irwin, J. M. St. Augustine
Lischkoff, M. A. Pensacola
McDuffee, T. M. Manatee
McIver, Robert B. Jacksonville
Milam, Ernest B. Jacksonville
Osincup, G. S. Orlando
Palmer, H. E. Tallahassee
Ross, William E. Jacksonville
Shackelford, C. W. Palm Beach
Shaw, W. McL. Jacksonville
Spiers, W. H. Orlando
Taylor, H. M. Jacksonville
Van Schaick, H. D. Jacksonville
Waas, F. J. Jacksonville
Warren, E. W. Palatka
Webb, C. C. Pensacola

* * *

The following councilors' reports were presented by the councilors of the Florida Medical Association at the pre-convention meeting held in Jacksonville, March 6th. A number of reports were made orally and written reports will be forwarded later for publication:

FIRST DISTRICT—W. C. Payne . . . *Pensacola*
Okaloosa, Walton, Santa Rosa, Escambia.

I beg to make this report as Councilor of District No. 1, comprising the counties of Escambia, Santa Rosa, Walton and Okaloosa. There are two societies in my district, the Bi-County Medical Society, comprising the counties of Walton and Okaloosa, and the Escambia County Medical Society, comprising the counties of Escambia and Santa Rosa. Both of these societies are in a healthy condition and meet regularly. All members of the medical profession in these four counties who are eligible for membership in the State Association, with one or possibly two exceptions, are members of one of these societies. I have met with the Bi-County Medical Society at least once each year since I have been Councilor. The Society is very small but is made up of a very high

class of men and is very active. Escambia County Medical Society has so far had very enthusiastic and well-attended meetings and has had scientific papers of interest at each meeting. The State Association will this year meet with the Escambia County Society at Pensacola and this society is making preparations to make this a pleasant and profitable meeting for the State Association. Taking my district as a whole, I am well pleased with the condition of organized medicine.

SECOND DISTRICT—Julius C. Davis . . *Quincy*
Liberty, Gadsden, Jefferson, Wakulla, Leon, Franklin.

The Second District is well organized. We continue to hold quarterly meetings. We did recess the mid-summer meeting this past year. Our meetings are well attended, about 75% of the members present at each meeting. It has been our custom to invite members of the adjoining districts as well as the members of the Second District of the Georgia Medical Association and from each of these we have some visitors that help to swell our audience and promote a feeling of good fellowship among our neighboring physicians by becoming acquainted with them, aside from the many advantageous features to be derived from their entering freely into the discussion of papers with much valuable information.

The backbone of a good medical society is dependent on the kind of a secretary you have, and I want to say here the success of our society has been in no small measure due to the efforts of our loyal secretary, Dr. F. Clifton Moor, Tallahassee. Dr. Moor has been serving ever since the birth of our organization, until he refused to accept again. Our present secretary, Dr. J. B. Brinson, Monticello, will no doubt prove also to be a "live wire."

I believe we have as much harmony among our members as to be found in any medical society.

SIXTH DISTRICT—O. O. Feaster . . *St. Petersburg*
Pinellas.

The affairs of the Pinellas County Medical Society have been running quite smoothly and the services of the Councilor have been superfluous.

During the past twelve months there have been held sixteen regular and two special meetings with an average attendance of thirty-five members and eight visitors. The Society also had its usual annual Ladies' Night, a social event which was honored by the presence of President and Mrs. Dozier.

There was an average of two papers and three case reports for each of the regular meetings. During the year fifteen of the papers were given by out-of-county men, some of whom were of national prominence.

At the present writing, the Society has a membership of eighty-two, distributed as follows: St. Petersburg, 58; Clearwater, 11; Tarpon Springs, 4; Dunedin, 2; Largo, 1; Ozona, 1; and, residing out of the county, five. Sixty per cent have remitted 1930 dues to date.

Two members were lost by death, Dr. Harry C. Welch and Dr. S. B. Bieker.

The Society arranged for group physician's liability insurance which effects a saving of nearly 50% in premiums with the same protection.

The St. Petersburg members of the Society are running a membership roster in the daily papers during the tourist season so that winter visitors and transients may have the opportunity of selecting a physician intelligently rather than depend upon chance in a community which has numerous irregulars.

The fact that the Chambers of Commerce and the daily papers are constantly asking for more and more cooperation from the county society is looked upon as a good sign.

NINTH DISTRICT—D. M. Adams . . *Panama City*
Holmes, Washington, Bay.

The Bay County Medical Society for the year of 1929 has gone forward satisfactorily, and we find by each man paying special attention to one or more subjects and by cooperation our society has been given impetus, and individually this has worked for the betterment of the medical profession and humanity in general.

THIRTEENTH DISTRICT—W. M. Rowlett, *Tampa*
Hillsborough, Hernando, Pasco.

As your Councilor for the thirteenth District of the Florida Medical Association, which consists of the counties of Hillsborough, Hernando and Pasco, I beg to advise that I have endeavored to keep in close touch with the activities of the medical societies in the thirteenth district, as well as having personally interviewed practically every member of these societies.

At the beginning of the year, the Hillsborough County Medical Society held its usual annual meeting and banquet at which time some splendid talks were given on medical and civic questions of the day. The local members had invited a

large number of out-of-town physicians which aided greatly in making the occasion an outstanding event.

On January 9th, your Councilor had the pleasure of attending the annual banquet of the Tri-County Medical Society, which consists of Pasco, Hernando and Citrus counties, at which time some splendid talks were made and ideas advanced relative to organized medicine and the individual needs of their society. This society boasts of a one hundred per cent paid membership.

Looking over the hospital situation, I find that it is ample and well provided for in Hillsborough county. However, there is an unfortunate lack of proper hospital facilities in Hernando and Pasco counties. I recommend that this condition be called to the attention of your Hospital and Medical Education Committee with a desire of seeing if the situation can be improved.

Your Councilor has endeavored to stimulate an interest among the medical men of his district in the coming political campaign, urging them to see to it that men are elected to the next legislature who are friendly to organized medicine. Thus, I caution your Legislation Committee of the special need of activity along this line at the present time. In my opinion, there will be introduced by the cults, at the next legislature, two bills, one to create a board of "Physio-Therapy" and another a board of "Osteopedic Physicians", and in all probability amendments that will permit an increase in the activities of our present legalized cults.

FOURTEENTH DISTRICT—N. A. BALTZELL, *Marianna*
Calhoun, Jackson, Gulf.

There has not been the usual interest manifested in county medical society work that I had hoped, under a plan of regular established monthly meetings. It has been our plan to have these meetings on the second Tuesday at 7:30 p. m., and dinner at the Chipola Hotel in Marianna.

In January the personnel of the profession of the 14th district was urged by either the telephone or personal calls, to be present at our first meeting. Of twenty-one who had been at one time or another members of the Jackson County Medical Society, only eight responded. There are of the twenty-one physicians in the district, sixteen who reside in Jackson County, three in Calhoun County, and two in Gulf County. It is frequently quite difficult for the Calhoun and Gulf County members to attend on account of the distance, and Jackson County has such great area that the furthermost from Marianna would find it quite difficult to meet in the other counties of the district as often as once a month.

A proposition that has been discussed and probably has favorable features as a stimulus to better attendance, would be a district society with meetings every ninety days, and meeting places rotated four times a year. The eight or ten members who attend the meetings more or less regularly have appeared to possess considerable interest and enthusiasm, and we hope for some solution of the problem soon, that will bring at least a great majority of the doctors of the district together four to six times yearly.

FIFTEENTH DISTRICT—
C. W. SHACKELFORD *West Palm Beach*
Palm Beach, Broward.

Broward County Medical Society has been active and successful this past year. The society meets monthly and always has scientific programs. Ten papers were read by local members and two by invited guests. Two smokers were held and well attended. This society has twenty-one members; the average attendance for 1929 was 62%, which is a good record. All members but one paid their dues.

A spirit of good fellowship prevails in the Broward County Medical Society, and for this the members should be commended.

It is with regret that I am unable to report so favorably for Palm Beach County Medical Society. Some of our members seem to be in a state of lethargy, or are indifferent, or seem to think that they should be on the outside looking in, waiting for the death knell to be sounded.

At the beginning of the last year, it was thought that under the able leadership of our president, Dr. Frederick K. Herpel, the society would accomplish great things. Much was done but failed to meet with our expectations. The society meets once each month, but on a few occasions no quorum present. There were several excellent scientific papers read by various members of the society.

In July we were honored to have with us Doctor Elliott, a sister of Dr. Grace Papot, one of our members. She gave a very interesting and instructive address on "Medical Work in Japan."

Our society took a very active interest favoring the Basic Science Act. Members contributed funds for the expense of the writer to Tallahassee and Ocala in its behalf, feeling that the act if passed would be the most practical method of barring from our state incompetent and unscrupulous practitioners of various kinds. The fifteenth district councilor suggests that the Florida Medical Association continue in its efforts to accomplish this purpose. It should begin organization work now, get the proper forces together to secure its passage. If there are conflicting opinions as to the method, within the state association, they should be reconciled before the legislature meets, so at the opportune time there will be an united front.

The Palm Beach County Medical Society has thus far failed in its efforts to rid the county of illegal practitioners. Each individual county would be successful in this, if it had the full cooperation of the state association. Local politics play an important part in such matters. The Florida Medical Association should provide outside legal assistance to each county society prosecuting these cases. Results would then be obtained.

The officers for Palm Beach county this year are: Dr. V. D. Stone, president; Dr. Lloyd Netto, vice-president; Dr. Gaylord Lewis, secretary; Dr. Grace Papot, treasurer. These officers are young, aggressive and progressive, so feel that we shall be able to give a good account of ourselves next year.

EIGHTEENTH DISTRICT—

T. M. McDUFFEE *Manatee*
Manatee, Sarasota.

The Manatee and Sarasota County Societies are in good condition. We meet jointly on the second Tuesday night in each month. We alternate the programs, one society leading at one meeting and the other society at the next meeting. The scientific programs have been good and very interesting, each paper being fully discussed. Manatee County Society has twelve active members and Sarasota County Society has nine.

On the whole, it seems to me that this has been the most interesting year of our societies.

* * *

The Editorial and business offices of the Florida Medical Association have been moved from the State Board of Health Building, Jacksonville, to 404 Florida Theatre Building, Jacksonville. 'Phone 5-6186.

The Pasco-Hernando-Citrus County Medical Society met with Dr. J. T. Bradshaw at Dade City, February 13th. Dinner was served at the Gray Moss Inn Hotel at 7 p. m., which was followed by a scientific program. The next meeting of the Society will be held with Dr. Geo. A. Dame of Inverness as host.

* * *

Drs. Chas. and William Mayo of Rochester, Minn., have had their yachts at Panama City this winter and have made this point their winter vacation headquarters.

* * *

Dr. H. F. Watt of Ocala is now recovering from a streptococcic infection of his left hand.

* * *

Births in families of members of the Florida Medical Association:

To: Dr. and Mrs. Gordon Henry Ira, Jacksonville, a boy, Gordon Henry Ira, Jr., November 18, 1929.

To: Dr. and Mrs. Paul K. Jenkins, Miami Beach, a boy, December 29, 1929.

To: Dr. and Mrs. C. J. Heinberg, Pensacola, a girl, Carol Elizabeth, December 24, 1929.

To: Dr. and Mrs. Emory West Bitzer, a boy, Emory West Bitzer, Jr., December 1, 1929.

* * *

Dr. J. W. Draper of New York recently addressed the Orange County Medical Society, his subject being "Some Facts About the Omentum."

* * *

The regular meeting of the Pinellas County Medical Society was held February 21st at 8 p. m., at St. Petersburg. The following program was rendered:

Motion Pictures:

"The Influence of Drugs on Gastro-Intestinal Motility."

"The Anatomy of the Abdominal Wall."

Mr. J. W. Phelan and Mr. R. L. Martin of the Petrolagar Laboratories, Chicago.

Papers:

"The State Health Department—Some Phases of Its Work of Interest to the Physician." Dr. Henry Hanson, State Health Officer, Jacksonville.

"A Bit of Psychology and Christian Healing." Dr. J. W. Clemmer, Columbus, Ohio. (Discussion opened by Rev. Tinney Dean.)

Drs. H. F. Watt and R. D. Ferguson of Ocala recently visited clinics in New Orleans.

* * *

Dr. Don S. Fraser of Panama City was recently elected commander of the James H. McKnight Post No. 66 of the American Legion.

* * *

Dr. John S. McEwan of Orlando recently returned from a five days' hunting trip.

* * *

Dr. T. Z. Cason of Jacksonville was recently elected president of the Florida Public Health Association to succeed Dr. L. M. Bristol of the University of Florida faculty. Other officers elected included: Dr. E. C. Gillette, Jacksonville, vice-president; Mrs. M. L. Stanley, Daytona Beach, secretary; G. E. Therry, Jacksonville, treasurer, and Mrs. John Leonardy, Sanford, Dr. D. D. Martin, Tampa, and Carl Lehman, Orlando, members of the executive committee.

* * *

The Broward County Medical Society held its regular monthly meeting at the Las Olas Inn, Ft. Lauderdale, February 14th. A chicken dinner was served after which Dr. Bransford Lewis of St. Louis read a paper on "Floating Kidney."

* * *

The Sarasota and Manatee County Medical Societies held a joint meeting on February 11th. Dinner was served at 7:30 p. m. followed by a scientific program in charge of the Manatee County Medical Society. The manufacturers of Petrolagar exhibited three reels of motion pictures descriptive of intestinal parastolsis and diseases of the abdominal wall. Dr. S. G. Hollingsworth of Bradenton read a paper on "Medical Practice" which was discussed freely.

* * *

The Marion County Medical Society entertained the Central Florida Medical Society in Ocala, February 26th. Dr. H. C. Dozier, president of the Florida Medical Association, addressed the Society, following which Dr. J. N. Moore of Ocala presented a paper on a roentgenological subject. A motion picture demonstration on "Operation of Peptic Ulcers" was also shown.

* * *

The State Board of Health held its annual meeting in Jacksonville February 11th, which was attended by all members of the Board, consisting of Honorable Charles H. Mann, Jacksonville, Dr. H. Mason Smith, Tampa, and Dr. William D. Nobles of Pensacola. At this meeting the contract for biologics to be used by the State Board of Health was awarded to E. R. Squibb & Sons, except for antirabic serum, which was given to the Oklahoma City Laboratory, whose quotation was the best received and which laboratory has a license issued by the United States Public Health Service and whose products are recommended by this Service. There were many other questions taken up. The new location of the Vital Statistics Bureau was reviewed by the Board and an architect was called in to present plans for an addition to the old building which is to be overhauled and added to if an appropriation can be obtained from the next Legislature.

* * *

The medical staff for 1930 of the Jackson Memorial Hospital of Miami was appointed recently at a meeting of the Board of Trustees, according to an announcement made by Dr. A. J. McRae, superintendent. The appointments and the departments in which they will serve are as follows:

Surgery, Drs. R. O. Lyell, T. W. Hutson, J. C. Turner and C. F. Sayles.

Medicine, Drs. R. M. Harris, E. C. Thomas, E. S. Nichol and P. T. Skaggs.

Obstetrics, Drs. S. D. Aronovitz, Homer Pearson, J. R. Graves and M. C. Wilson.

Eye, Ear, Nose and Throat, Drs. B. H. Palmer, W. J. Vinson, C. E. Dunaway and G. E. Chandler.

Urology, Drs. D. W. Harris, R. J. Holmes, E. Clay Shaw and Milton Coplan.

Pediatrics, Drs. C. L. Kennon, G. H. Withers, W. W. McKibben and W. Quillian.

Dermatology, Drs. E. D. French and B. Litterer.

Neurology, Drs. G. H. Benton, P. L. Dodge and I. H. Agos.

Consulting neurologist, Dr. E. K. Jaudon.

Dentists, Drs. R. Glenn Smith, M. F. Wielage, T. C. Henslee and Marvin King.

Orthopedics, Drs. A. H. Weiland and D. T. Babcock.

Pulmonary tuberculosis, Dr. M. Jay Flipse; pathology, Dr. Iva C. Youmans; roentgenology, Drs. G. Raap and C. D. Cleghorn and consulting roentgenologist, Dr. J. H. Lucinian.

* * *

The following officers have been elected by the Dade County Medical Society to serve for the ensuing year: Dr. P. T. Skaggs, president; Dr. R. M. Harris, vice-president; Dr. E. N. McKenzie, secretary, and Dr. Nelson T. Pearson, treasurer.

The many friends of Dr. William J. Calvin of Eustis, will regret to learn of his death which took place January 22nd at Eustis. His death was a result of accidental gunshot wounds which occurred while he was hunting. Having stopped beside a tree to rest after shooting doves, Dr. Calvin rested his gun against his legs. His dog, companion of many a hunting expedition, brushed against the weapon and in some manner discharged it, the full load taking effect in the master's side. The wounded physician lay in the woods, unable to help himself, with the dog at his side, until a searching party found him. Dr. Calvin related the story of how he was shot before he lost consciousness.

Dr. Calvin was born in Brooklyn, N. Y., graduated in medicine May, 1910, from the College of Physicians and Surgeons, Chicago. He practiced in Chicago and later in Eustis, Florida. At one time, he was vice-president of the Central Florida Medical Association and he was also a member of the Lake County Medical Society, the Florida Medical Association and a past president of the Eustis Kiwanis Club.

The following resolutions were spread on the minutes of the Pinellas County Medical Society on January 24th:

On Thursday, January 9, the Pinellas County Medical Society lost one of its most brilliant and best loved members, when death came to Dr. Siegfried B. Bieker.

The circumstances surrounding his death were particularly tragic. He came to his office in apparently robust health and soon afterward was struck down by an intracranial hemorrhage. His ever alert mind immediately grasped the situation for just as consciousness faded he cried out that he had had a stroke and was going to die. Respiration soon ceased but was restored by friends who came to his aid in his extremity. After an hour it ceased again and never was resumed. Artificial breathing was again set up and maintained by his friends and by willing relays of helpers. As the hours passed by it became evident to all that it was useless; yet among his comrades there could be found none who would give the order to stop. So throughout the hours of that tragic day the rhythmic motion went on, the strong young heart still keeping up the unequal struggle.

Never did a man in this community have as much medical aid. His friends came from all over the city giving up other duties to render what help they could, but to no avail. Night came on and at length life flickered out and Bieker was dead—surrounded as he would have wished, by those he loved best.

In the death of this young man on what seemed but the threshold of his career we have lost one of our most able and loyal members. He combined a mind of exceptional clearness with an amiable and winning personality which endeared him to his fellowmen and to his patients.

He was ambitious, always striving to add to his knowledge by study and clinical work so that he might render still better service to his patients. He possessed a courageous spirit, ever zealous to combat evil and always a champion of right and justice. He was cheerful, loyal to his friends, sympathetic and kindly, all that a good physician should be. Of him it may be said as truly as of any man:

"None knew thee but to love thee,
Nor named thee but to praise."

Be it therefore resolved, that the members of the Pinellas County Medical Society extend their sincere sympathy to his wife, Dr. Annette Bieker, to his father and mother, brothers and sisters, and that a copy of this inadequate memorial be sent to them in token of the esteem in which this Society held their friend and comrade, Dr. Siegfried B. Bieker.

(Signed) T. R. Griffin,
R. H. Knowlton,
Ralph D. Murphy,
Committee.

Approved by the Society
January 24, 1930.
O. O. Feaster, Sec'y.

Dr. G. H. Edwards of Orlando was a guest of the Lake County Medical Society at a meeting held on February 6th and read a paper on "Surgical Correction of Retroversion."

* * *

At a recent meeting of the DeSoto-Hardee-Highlands County Medical Society, the following officers were elected: Dr. H. P. Bevis, Arcadia, president; Dr. M. C. Kayton, Wauchula, vice-president, and Dr. H. V. Weems, Sebring, secretary-treasurer.

The Suwannee River Medical Society met at Perry, in regular session, February 14th. The Perry membership afforded a social program during the dinner hour under the direction of Miss Mary O'Quinn which was very much enjoyed. This was followed by a scientific program. Dr. A. D. Little of Thomasville, Ga., read a paper dealing with the education of the laity in medical matters and Dr. Ernest H. Wahl, of Thomasville, Ga., presented a paper on "Cardiac Pain." Plans were made to hold the March meeting of the Society at the Veterans' Bureau Hospital, Lake City, with the Staff of the Archbold Memorial Hospital of Thomasville, Ga., as guests.

* * *

The Duval County Medical Society recently held a dinner at the Hotel Carling, Jacksonville. Dr. Paul White of the Massachusetts General Hospital at Boston was the guest of honor and the subject of his discourse was "Life Expectancy in Heart Disease." There were present about 150 doctors, many of them guests from adjoining county medical societies. The Society endorsed the proposed appearance here of Dr. Joseph Bloodgood, to address the Jacksonville Public Forum on the theme of cancer control.

* * *

The following bill was introduced in Congress April 15, 1929:

[H. R. 224, Seventy-first Congress, first session]

A BILL To provide for the establishment of a branch home of the National Home for Disabled Volunteer Soldiers in the State of Florida.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Board of Managers of the National Home for Disabled Volunteer Soldiers is authorized and directed to select a tract of land approximating three hundred acres now owned by the Federal Government located in the State of Florida or to acquire land by donation and without expense, as a site for a branch home of the National Home for Disabled Volunteer Soldiers to be located in Florida. The land selected or acquired shall be transferred to the jurisdiction of the Board of Managers of said home, together with all books, maps, records, and other documents necessary for use, administration, and control of such land.

Sec. 2. The Board of Managers of the national home is authorized and directed to provide for the improvement of the land so selected or acquired and for the construction, equipment, operation, and maintenance thereon of suitable buildings for the use of a branch home.

Sec. 3. There is hereby authorized to be appropriated the sum of $3,000,000 to carry out the provisions of this act.

The following discussion of this Bill is exerpted from the report of hearings before the Committee on Military Affairs, dated Friday, January 17, 1930:

STATEMENT OF HON. ROBERT A. GREEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. GREEN. Mr. Chairman and members of the committee, my waiting here has been very pleasant and to my advantage. It has been a pleasure, and informing, to hear the free discussion of all of these matters. I want to thank the committee for giving us a hearing on this bill and especially to thank General Wood for his appearance in the interest of these soldiers' home buildings and soldiers' home building legislation.

During the Seventieth Congress, owing to so many persons, ex-soldiers residing in my State, permanently and temporarily, the State meeting of the Spanish-American War Veterans, soon after their adjournment, wrote me asking that a branch of the national home be established in the State of Florida. Of course, I took the matter up promptly with General Wood, and he very promptly responded with such information and advice as he, as the president of the Board of Managers, could offer along this line.

The result was that during the Seventieth Congress I introduced a bill in the House and Senator Fletcher introduced a similar bill in the Senate, calling for the establishment in the State of Florida of a branch home of the National Home for Disabled Volunteer Soldiers, and calling for an appropriation of $3,000,000 and, of course, the lands to be provided without expense to the Government—the home to be erected either on existing Government lands, or on lands to be furnished without expense to the Government. The response in our State was unusually good; numbers of persons and organizations offered tracts of land and, if I may be excused for saying so, at that time it was my pleasure personally

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay	Don S. Fraser, M.D., Panama City.					36%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	
Columbia	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		64%
Dade	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	14%
DeSoto-Hardee-Highlands	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	60%
Hamilton	R. A. Barnett, M.D., White Springs.					
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	56%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	60%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	42%
Leon-Gadsden-Liberty-Wakulla-Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	52%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	47%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	37%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	85%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	42%
St. Johns	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	
Sarasota	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	33%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
Washington-Holmes	W. C. Harper, M.D., Chipley.					

NOTE—Secretaries: Please submit information to complete the above schedule.

to offer a tract of land and I would have been glad to have done so and did tell members of the committee it would be a pleasure for me to donate it. Anyhow, the matter took on a great magnitude; other States saw it would be well to have a home somewhere in the Southeast, and numbers of bills were introduced. It led eventually to an attempt by the Senate first to broaden the bill and to change the word from "Florida" to "Southeast," to which, of course, Senator Fletcher and Senator Trammell acquiesced.

Last session, just before the adjournment of the House, the bill apparently was almost ready for action by the House, but the few hours before adjournment prevented definite and final consideration by the House or the whole Committee on Military Affairs. So that in the Seventy-first Congress we find this bill introduced by me again—it has already passed the Senate—providing for the establishment in the Southeast of a branch of the soldiers' home, and an appropriation of $2,000,000 and, as I believe, is before your committee in that form, and also the bill introduced by me, the companion bill to that bill, is in your committee, with the exception, I believe, that it still carries the word "Florida."

Of course, I would like my House colleagues to know that if the House Members or this committee believe it more advisable to have the word "Southeast" supplant the word "Florida" in my bill, I shall acquiesce in it.

The situation is, as has been well brought out, in our hearings, that the applications for admission to the homes are growing. We have, I believe, only 500 beds vacant, outside of the one in Maine, with the expectation of 3,000 soldiers soon to ask for admission. The number applying from my State, through me, is very large and through the other House Members, of course, I am sure is large. It happens in my State that not only World War veterans, not only Spanish-American War veterans, but particularly the War Between the States veterans, have gone there on account of our climate. That makes, of course, the demand locally greater upon us for admission into these homes. The president of the home in Tennessee and the one in Virginia, as promptly as they possibly could, have given to our Florida people admission into their homes, but the fact of the matter is that if one goes from south Florida to one of those homes he travels some 1,400 miles; if he goes from Mississippi to one of those homes, he has probably traveled half a thousand miles; if he goes from Georgia, he probably travels a third or fourth of that amount. So that it seems to me it is a very good business policy and very good reasons for the establishment, at this time and by this Congress, of a branch soldiers' home in the Southeast.

Now, then, as to where that is to be established, your committee can leave, I presume, with the board of managers to decide on such place as they believe and know would be the most suitable place. It happens the district I represent in Florida, I do not believe, is more than 40 miles from the exact center of all of the portion of the Southeast which would be served by such a new branch of the soldiers' home. It is right at the hub of the wheel of the center of the population. It happens, also that your Federal Government has there a United States veterans' hospital, one of the finest, most well arranged and best managed of all the hospitals for veterans in our country, and it happens they have some 300 acres of the choicest land there that the Government owns. It happens, also, according to the figures in Director Hines's office, that the per capita maintenance cost of the World War veterans' hospital at Lake City, Fla., is, I believe, smaller than at any other hospital in the Union, and if the per capita maintenance cost of the veterans' hospital is smaller, it would be reasonable to conclude that a branch home of the National Home for Disabled Volunteer Soldiers could be operated near to this hospital with a minimum expense per capita. The specialists there, of course, could attend your soldiers, if need be, and could cooperate in that way. However, those things are to come later.

Now I have here in my hand two or three brief letters and resolutions, one of them a resolution by the Florida department of the American Legion, earnestly petitioning Congress to at this time establish this home. They use the word "Florida" in the resolution, however, I want to advise the committee. Also, the Florida State Medical Board have passed a resolution, which I have here; also the Spanish-American War veterans, of my State; and, if it is within the proprieties, I would like to put these in the hearing, with your permission.

The CHAIRMAN. Without objection, it is so ordered.

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Mr. GREEN. There are one or two other very brief statements, of half a page or so; one by Hon. Fred P. Cone, past president Florida Bankers Association, which I understand is joined in by many of the citizens of Lake City, which I would like to go in.

I believe that is about as far as I care to go at this time. I earnestly hope the committee will bring out a bill for the establishment of this home, and earnestly hope it will have the word "Southeast" in it, or the word "Florida." It would look reasonable that eventually, probably west of the Mississippi River, there would be a branch established, if ours is established now. Then, if that is the case, it could carry the word "Southeast" or "Florida."

The CHAIRMAN. What States, under your bill, would you say would come under that?

Mr. GREEN. I should call, as meant in this bill, the Southeastern States—those States east of the Mississippi River—and, in this case, south of Tennessee and Virginia, as they already have soldiers' homes.

The CHAIRMAN. North and South Carolina?

Mr. GREEN. I should call Mississippi, Alabama, Florida, Georgia, North and South Carolina, the States of the Southeast—as the intent and purpose, at least, of my bill.

The CHAIRMAN. Florida, also?

Mr. GREEN. By all means Florida is a State of the Southeast, the one most accessible, and the one which would undoubtedly give better recuperative climatic benefits.

The CHAIRMAN. Is the climate down there good for the soldier?

Mr. GREEN. So good, Mr. Chairman, is that climate for the soldiers that right now, in St. Petersburg, and also at Lake City, Fla., at this moment, I believe you would find more veterans of all wars, including those who are disabled and are now outside of hospitals and homes, considering the population of those cities, that you will find more veterans on those green benches there today, enjoying the warm sunshine, than any place else, and the same condition obtains throughout the State.

The CHAIRMAN. Do you represent the St. Petersburg district?

Mr. GREEN. It is beyond my district, but all in the State of Florida. Lake City, Live Oak, Gainesville, Ocala, and many other splendid cities are in my district.

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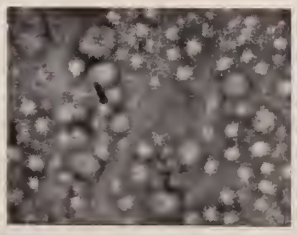


FIGURE 1

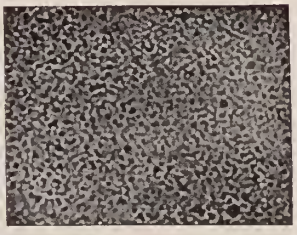


FIGURE 2

The CHAIRMAN. When I was down at St. Petersburg they took it for granted there was not any doubt, if a home was located in the Southeastern States, that it was going there.

Mr. GREEN. St. Petersburg desires such a home; many other places in the State of Florida also desire such a home, and numbers of places will furnish necessary lands.

The CHAIRMAN. There is one thing I want to ask you, General: Somebody told me one place that was talked about was over at Fort Dade or De Soto. If they put it there, there will never be a chance for a veteran to get off of that place, because you can only get out there by boat.

General WOOD. Mr. James, I would state that, while the Board of Managers have no preference, the question of accessibility both by railroad and also the neighborhood to some fairly large center would be one of the things that would be very decidedly considered by the board.

The CHAIRMAN. That would bar those two places, then, because I do not know how a man could get out there unless he had a private yacht, or was a millionaire.

General WOOD. We have found that the homes located near a fairly large center of population are the best ones to operate, both from the standpoint of efficiency and economy of operation, and also the contentment of the members, of any of the homes that we have.

Mr. GREEN. No trouble to find plenty of places in Florida large enough and with all roads and transportation facilities, as well as all necessary accommodations.

Mr. REECE. But I take it the Board of Managers have given no consideration to the establishment of this proposed home?

General WOOD. Oh, no. We have no legislation yet.

The CHAIRMAN. But that is one thing you are going to take into account, the accessibility, so that you are not going to quarter these men on some island.

General WOOD. Oh, no; we would not do that for a moment. You take all of our homes, with the possible exception of the one in Maine and the one at Battle Mountain, S. Dak., and they are all near moderate-sized or large-sized centers of population. I would not think for a moment—it would not be fair to the men—of putting a home off on some island.

William D. Jones

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Mr. GREEN. May I ask if any of the existing hospitals have been located so that they would be adjacent to your World War veterans' hospital? I understood you had, and I was wondering how that was working out.

General WOOD. Begging the gentleman's pardon, the last home which the board established was the one at Battle Mountain, S. Dak. Since then, we have been released of the one at Bath, N. Y., but that question you raise has never been discussed, because we have not built any.

Mr. GREEN. I have noticed that most of my requests for admission to the home come as a result of hospitalization at Lake City, Fla., and that is a World War veterans' hospital.

General WOOD. That is probably so, because we have every day many men coming to us who have completed their hospitalization but are not able to make their living, and we take them in for domiciliary care at the home.

Mr. GREEN. Then, locating it near an existing Government hospital would appear quite feasible.

Mr. MCCLOSKEY. General, in view of the increased membership from the Spanish-American War and from the World War that is going into the homes, do you think it will soon become necessary to establish one of those homes in the Southwest as well as in the Southeast?

General WOOD. That matter has been discussed quite thoroughly by the board, and they feel, with the increasing population in the homes, that several new homes will be indicated in the next few years; but, at the present time, we did not feel we could go any farther in our recommendation than the recommendation we have made. But I think the question asked by the gentleman from Texas has a great deal in it and is one that future Committees on Military Affairs of the House will have to consider.

Mr. MCSWAIN. I have not heard anything from Pennsylvania.

Mr. COCHRAN. Pennsylvania is hungry.

General WOOD. I think Pennsylvania is pretty well surrounded by soldiers' homes. Bath is just across the line.

Numerous letters as well as a resolution passed by the Florida Medical Association at its last annual meeting were introduced by Representative Green in an effort to secure a branch of the National Home for Disabled Volunteer Soldiers for Florida.



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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

NATURE'S medicine chest contains no more useful or important remedy than rest. In the treatment of tuberculosis, we use numerous devices to immobilize the lung itself, but still rely chiefly on general body rest. Complete rest, however, is not achieved merely by commanding the patient to be quiet or by putting him to bed. Tenseness of mind, nerves and muscles prevents most of us from resigning ourselves to a vegetable inactivity and so deriving the maximum benefit from rest. Edmund Jacobson, of the University of Chicago, has made a scientific study of rest, on the basis of which he has developed a technique of securing complete relaxation. The following excerpts are derived from his book, "Progressive Relaxation," published by the University of Chicago Press.

NEURO-MUSCULAR HYPERTENSION AND RELAXATION

Neuro-muscular hypertension is due to a reflex excitation or irritability. In disorders involving structural nerve lesions, such as hemiplegia and diplegia, this tenseness is easily discernible. Similar, but less obvious, symptoms of hypertension may be observed also in persons without nerve trauma and in those not ordinarily branded as "nervous, restless or irritable."

The symptoms of hypertension have their origin in a variety of conditions, including prolonged pain or distress, emotional disturbances, such as fright, loss, or bereavement, bacterial infections, trauma of all kinds, chronic nervous strains, and possibly congenital defects of the nervous system. The author distinguishes sharply between hypertension and neurasthenia (a fatigue phenomenon) and says that, like arterial hypertension, the term represents not a diagnosis but merely a systemic condition and does not deny possible underlying pathology.

OVERCOMING RESIDUAL TENSION

When an unpracticed person is instructed to relax, tests generally reveal a "residual tension" which appears to be a fine tonic contraction along

(*Continued on page* 426)

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with slight movements or reflexes. The respiration is slightly irregular, the pulse may be moderately increased (as compared with the pulse in complete relaxation), there are local reflex activities such as frowning, movement of the eyeballs, restless shiftings of head, limb or finger; the knee jerks can be easily elicited, and a sudden, unexpected noise causes the patient to start. Doing away with this residual tension, slight as it may be, is what is needed to derive the full benefits of relaxation. This is accomplished only as the result of practice. When relaxation is complete, the individual lies quietly with flaccid limbs, there is no trace of stiffness, no reflex swallowing, movement of the eyelids, nervous movements or tremor, while mental and emotional activity dwindles and disappears for brief periods. The condition is pleasant and restful. The sleep which often results is not a hypnoidal or trance state but a perfectly natural sleep.



The patient is taught to localize muscular contraction; in this case, the orbicularis oculi.
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(*Continued on page* 428)



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familiar, the patient becomes aware of what he is *not to do;* he learns to "let go" and discovers that relaxation is simply the negative state of contraction. Practice with a given set of muscles eventually enables him to relax them without effort. Thus, one set of muscles after another is trained, not omitting the facial muscles and the eyes, until the patient learns to relax the entire body at will.

SUGGESTION NOT A FACTOR

At no time is the instruction given to stop thinking or to make the mind a blank. The fact that one may go to sleep while practicing muscular relaxation harmonizes with the laboratory evidence that mental and emotional activity always involves a motor element and that by decreasing this motor element such activity is apparently diminished. The author insists emphatically that the method of progressive relaxation is not a form of "suggestion" or hypnosis; in fact, in his training of patients, he scrupulously avoids suggesting effects that may follow and simply directs his patient what to do in the same manner as when prescribing diet or exercise. Voluntary relaxation of an undesired mental activity differs in mechanism from so-called "suppression" or "repression," which are commonly attended with effort, which is the reverse of relaxation. In progressive relaxation, the subject exercises the "will" to relax, and success is dependent on habit formation.

EMOTIONAL ACTIVITY INVOLVES MOTOR ELEMENT

Mental and emotional activity always involves a motor element. On the basis of his experiments with intelligent subjects, the author concludes that a tenseness of muscles of the ocular region accompanies visual imagery. With complete ocular relaxation, the image disappears. Auditory imagery is similarly associated with a sense of tenseness, felt perhaps in the auditory apparatus but characteristically in the ocular muscles. When the subject succeeds in maintaining the imageless state for a relatively prolonged time, natural sleep ensues. "Nervous individuals tend to rehearse their griefs, difficulties and problems, considering incessantly and perhaps incoordinately what to do about them; and this emotional reflection evidently is a fountainhead of nervous hypertension, which relaxation mechanically shuts off."

(*Continued on page* 430)

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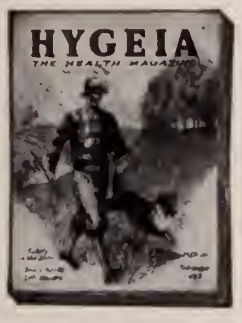
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THERAPEUTIC APPLICATION

Dr. Jacobson believes this method of obtaining rest has possibilities of widespread therapeutic application. In some disorders, it may be used as the principal or only method of treatment, while in others it may be regarded as an adjunct to other medical or surgical treatment. An analysis of the 81 cases treated under his direction by relaxation alone reveals that most of them were conditions dependent upon or related to neuroses or psychoses. The list of pathologic conditions treated includes nervous hypertension, chronic insomnia, convulsive tic, esophageal spasm, Graves' disease, mucous colitis, spastic paresis, stuttering, stammering, and others. In this series of 81 cases, he reports objective results in terms of improvement as follows: slight—13; marked—28; very marked—36; doubtful—4. Equally good are the results of cases in which supplementary dietetic or surgical treatment was indicated and used.



Relaxation with open eyelids gives the patient a particularly vacuous appearance.
Courtesy U. of C. Press.

* * * *

IS THE METHOD APPLICABLE TO TUBERCULOSIS?

Little mention is made in the book of tuberculosis, perhaps for the reason that the author's research has been concerned primarily with the treatment of conditions more definitely dependent upon, or associated with, neuro-muscular tensions. Since, however, rest is the pillar on which the treatment of this disease depends, it would seem worth while to investigate the possibilities of this method for tuberculous patients. How common it is to see patients "taking the cure" harassed by worries of home, depressed by prospects of the future, fidgety for want of something to occupy the mind and hands, restless from long waiting, and impatient to have done with the tedium of institutional regimen. Merely "guarding the bed," as the Germans say, is one way of enforcing a degree of rest, but it is not of the kind from which maximum benefit is derived.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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* Average per cent according to Holt, "American Journal Diseases of Children," Vol. 10, page 239, 1915.

** Davidsohn, H.—Ueber die Reaktion der Frauenmilk, Zeitsch. far Kindern., Vol. 9, 1913, page 15.

*** Fridenthal, H.—Ueber die Eigenshaften kuenstlicher Milchsera und ueber die Herstellung eines kuenstlichen Menschenmilchersatzes. Zentralb. f. Physiol., Vol. 24, 1910, 687.

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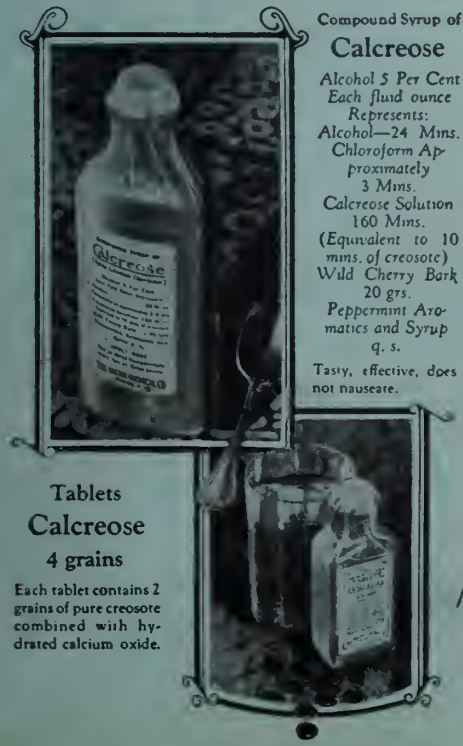
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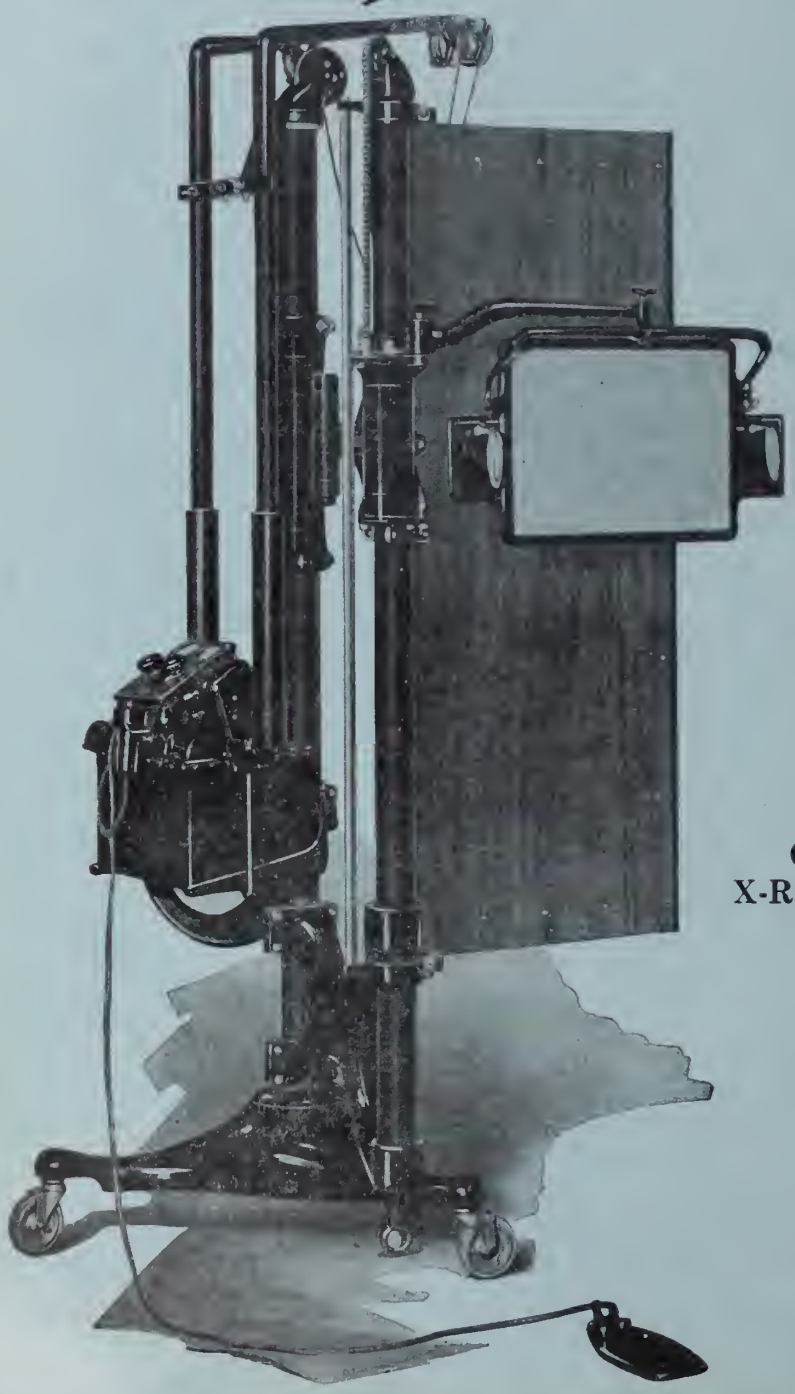
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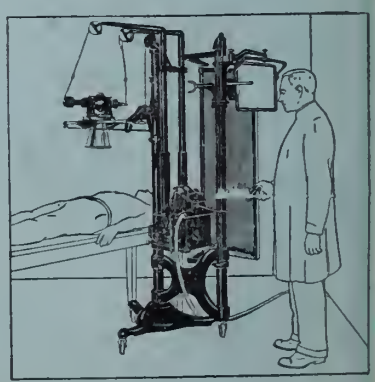
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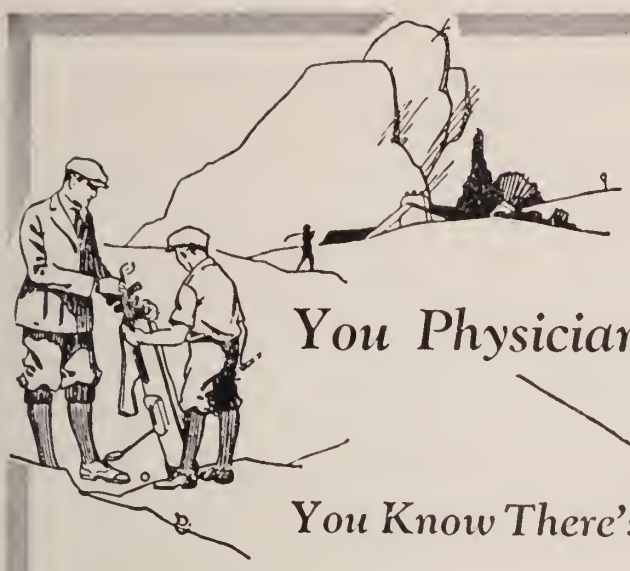
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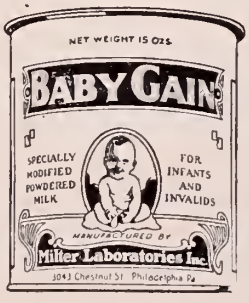
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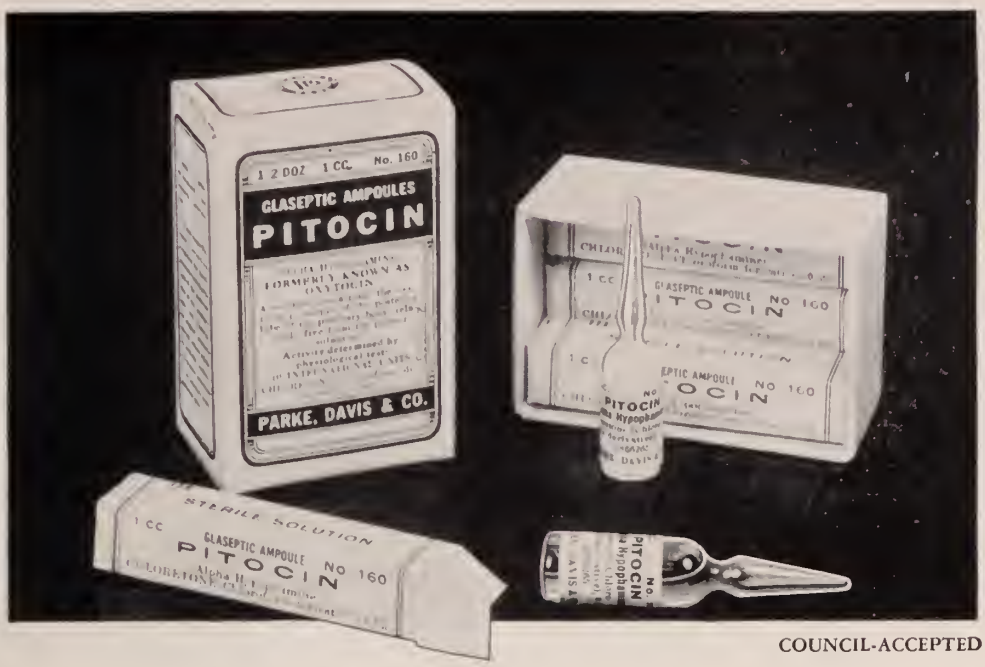
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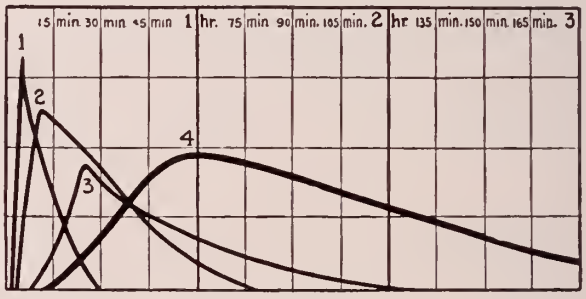
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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION
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A FEW POINTS ABOUT FOREIGN BODIES IN THE LOWER AIR PASSAGES WITH REPORT OF TWO CASES

M. A. Liscukoff, M.D., F.A.C.S.,
Pensacola.

There are classical indications and contraindications for certain operative procedures, but foreign bodies in the air passages often have to be removed without taking these facts into consideration. Foreign bodies are so varied in character that a paper of this brevity should allot no time to their description.

The danger of instrument introduction is so slight when expertly done that it has to be disregarded; in fact, Jackson says that when skillfully introduced, there is no danger from the presence of a bronchoscope in the laryngotracheobronchial airway.

PREPARATION OF THE PATIENT

Emergency patients as a rule cannot be carefully examined beforehand; some can be gone over to ascertain a little information, but a roentgen-ray examination should be made unless time forbid and it is nonessential for diagnosis. It is nearly always better to give a preliminary hypodermic of morphine and atropin to reduce the secretions and reflexes.

Examination of the mouth for food, deciduous teeth, loose crowns, plates, etc., will prevent unnecessary complications. Examination of the nose, fauces, pharynx and larynx should always be done.

Technique.—The head is bent forward on atlanto-occipital articulation, a 6x6x6 triangular pillar lifts the head up. The instrument can be introduced easily and without anesthesia and the larynx quickly exposed; the bronchoscope can be made to slide down easily and as quickly as necessary. The exploration of the tracheobronchial tree is a matter of following the lumen. To the inexperienced, certain preliminaries must be observed (1) epiglottis, (2) 2 c.m. down the posterior wall of the pharynx, (3) lifting the tongue and epiglottis, (4) pushing the tongue more forward and instrument into the anterior commissure.

INSTRUMENTS

Many types of instruments are in use, but those illuminated directly by a carrier light distally are used by the followers of Jackson in this country, while those trained on the continent, prefer reflected illumination. In both types, the technic is the same. In addition to the permanent tubes are some modifications, the most popular of which is the directoscope used by Haslinger. Because of its newness, some are unfamiliar with it, and have not given it a fair trial. For rapid examination, and in cases where the lesion has not reached the terminal bronchi, it has served me well.

In very young children after the removal of beans, fruit pits, etc., there is a general tracheobronchitis that may cause a dyspnoea—or having the tube in too long will cause an obstructive dyspnoea requiring a tracheotomy. For this reason, children should always be kept in bed for two or three days for observation.

The report of the two following cases will bring out some interesting points left out in the effort to avoid unnecessary details:

Case 1.—N. W., white male, age 13 years. Present history: Got a sandspur in his windpipe yesterday. Unsuccessful attempt at removal then, and again this morning, after three hours' of manipulation, makes it hard to get his breath. Other history irrelevant.

Examination of air passages shows sandspur attached under right vocal cord. Mucous membrane of pharynx and larynx traumatized, excoriated and bleeding from previous manipulation which made it difficult to get child's cooperation.

Patient was sent to hospital. Under general anesthesia, examination reveals foreign body in trachea where it had been inhaled during anesthetic. Haslinger directoscope introduced, sandspur removed with grasping forceps. Patient made uneventful recovery; was hoarse next day; examination revealed edema in larynx affecting right cord. This disappeared in a few days.

Case 2.—B. F., white female, age 4. Present history: Sudden asphyxia immediately after supper; got some uncooked spaghetti in throat.

Examination revealed a well-nourished child dyspnoanic and cyanotic. Brunning type instrument introduced without anesthesia. Examination revealed lumps of pasty dough in larynx, trachea and bronchi which were removed with difficulty on account of the nature of the substance, bits of the foreign body being removed with suction.

Sudden cyanosis developed on operating table after removal of bronchoscope, so tracheotomy was done and tube inserted; artificial respiration resorted to and breathing restored. Breathing soon became regular and easy and patient was sent to room.

During the night, several small lumps of spaghetti coughed up through tube. Difficulty to take liquids noticed, so saline drip ordered. With soothing vapor given in croup tent, breathing became more normal. Six days later, smaller tube put in as patient was unable to breathe through larynx; two days later (8th day) tube removed, wound closed.

Patient discharged December 30th, entirely well but seen January 28th and February 25th with no untoward symptoms from experience.

Regime.—The first case was the ordinary sandspur seen along our Gulf Coast and is the most common foreign body encountered here. In spite of the inexpert handling, causing unnecessary traumatism before it got into our hands, there was almost instant recovery. The other case is interesting from many points, the unusual accident and type of foreign body, the necessity for prolonged operative procedure, the inability to remove foreign substance in entirety; the immediate edema following extubation necessitating a tracheotomy and the rapid healing without untoward symptoms thereafter.

Foreign bodies in the laryngotracheobronchial airway, are varied in type, but careful and skillful care will reduce our mortality and morbidity.

STERILITY IN THE FEMALE*

A. R. Haisfield, M.D.,
Pensacola.

Sterility in the female may be defined as the absence of fertility. Fertility is dependent upon the deposition of healthy spermatozoa in a normal vagina. The cervix and uterus must be in a condition for the transmission of the spermatozoa; the uterus in a condition for the embedding of the ovum. An obstruction or obstacle anywhere between the vagina and outer end of the Fallopian tube may cause sterility.

Physiological sterility is present before puberty and after the menopause. However, there are cases on record where girls of ten and even nine years bore children, one reported by Bodd weighing 3,500 grams. (DeLee). DeLee also says pregnancy has occurred after the menopause. Renaudin reports a case where twelve years after the menses ceased a living child was born. Kennedy reports the case of a woman who had five labors and one abortion after the fiftieth year. There is a temporary physiological sterility during pregnancy and to some extent during lactation.

Absolute sterility is a condition in which impregnation is impossible, as in certain cases of defective uterus, ovaries or congenital absence of vagina. It may be due to destruction by new growths or following operative measures.

Primary sterility denotes that the individual does not conceive under normal conditions during the first few years of married life. Kirsch sets this time at three years, Torkel and E. Frankel at five years. Mathews Duncan is responsible for the statement that only seven per cent of women bear children after three years of normal, married life. He thinks the main element is the age limit of marriage. Age 16 to 19 is associated with relative sterility, maximum pregnancies 20 to 25, declining slowly to 35, rapidly from 35 to 45, after which births are rare.

Secondary or acquired sterility describes that individual who at first is capable of becoming pregnant, later becoming incapable of fertilization.

Etiology: The causes are idiopathic and acquired. The main idiopathic causes are fetalism and infantilism of the genital organs.

In the fetal type, there is a faulty or arrested development during intra-uterine life, represented by the various forms of uterus didelphys or the failure of the union of the Mullerian ducts, and by conditions of aplasia such as absence of the vagina, uterus, ovaries or tubes.

In the infantile type, it is assumed that the individual was born with the full equipment of genital organs, without mechanical obstruction to fetation, but that during childhood, an arrest in development takes place so that in the child-

*Read before the Escambia County Medical Society, Pensacola, Feb. 11, 1930.

bearing age the organs retain certain characteristics of the prepubescent period. This may be the only stigma of defective development and the individual may be otherwise perfectly or even exceptionally developed.

We have, therefore, two characteristic types of sterile women, one the large full-blooded with tendency to fat accumulation and the other the unripe, old maid type. In the first there are no external appearances to suggest a genital hypoplasia but in the latter numerous characteristics are recognized. The familiar marks of the old maid type of woman are long neck, long thorax, weak flat back with spinal curvature, winged scapulae with lack of muscular development, the flat pelvis, the poor development of the glutei muscles, narrow hips and slender thighs and the underdeveloped or thin pendulous breasts. In both types the nervous system is extremely sensitive and there is an unstable nervous equilibrium. There is usually some menstrual disorder, most commonly a dysmenorrhoea.

Causes of Infantilism: Heredity and environment may be important factors, but a certain number are due to syphilis, alcoholism, epilepsy and consanguinity. Premature birth, poor nourishment during infancy, rickets, tuberculosis and chlorosis are often found as causes in the histories of hypoplastic individuals. There may be a generalized hypoplasia of the heart, blood vessels and lungs of which the genitalia incidentally take part. It is also necessary to consider the other glands of internal secretion as the pituitary, the adrenals, the thyroid and the thymus. Due to the intimate relationship of these organs with the organs of generation, it is well known that mild disturbances of the harmony existing between these related organs of internal secretion may interfere with the important function of the ovary and the germ cells. Patients suffering with acromegaly and giantism, myxedema, Graves' disease and Addison's disease are usually sterile.

Ovaries: The ovaries may be quite normal or hypoplastic. In rare instances, they remain at or above the brim of the pelvis, usually associated with a short appendiculo-ovarian ligament which may cause a retroversion of the uterus. There may be marked thickening of the tunica albuginea. The hypoplastic ovaries show a marked increase in connective tissue.

This is theoretically explained on mechanical grounds that proper rupturing and bursting of the follicles is prevented by too great external resistance or insufficient internal pressure. Hans Bab suggests that the internal pressure of the follicle may be deficient on account of incomplete congestion as is manifested by the scanty or infrequent menstruation.

Tubes: W. A. Freund called attention to the fact that at birth the tubes are twisted in a spiral form, especially at the uterine ends. This condition is regarded as a stigma of infantilism and is thought in some way to prevent conception. It is thought also to explain some cases of extra-uterine pregnancy, occasionally occurring in women who have for a long time been sterile.

Bumm has brought out that defective development of the fimbriated end of the tube may act as a partial prevention of conception. Imperfect development of the cilia and musculature of the tube also has a considerable influence in preventing fertility.

Uterus: The body of the uterus is about 7 cm. long and the cervix is 3 cm. long. In the infantile uterus, this condition is reversed, the cervix being longer than the body. Developmental abnormalities in the position of the uterus often cause sterility, this being proved by the frequency with which the condition is cured by surgical correction. There is no satisfactory explanation that developmental flexions of the uterus cause sterility. But, under normal anatomic conditions, the cervix points directly into the pouch which lies behind the vaginal portion of the cervix which plays an important part in the retention of the semen. After coition, the cervix dips into this pool of semen and the passage of the spermatozoa is greatly favored. If the uterus is flexed forward or backward the cervix points directly away from the receptaculum. When there is no flexion, the cervix may be so long that it presses against the posterior wall, obliterating the receptaculum. Abnormal shortness of the anterior wall may cause the cervix to be pulled forward, thereby having some influence upon the chances of conception.

In some cases, there is present a cicatrical band in the cervical canal, usually at the level of the internal os. Bumm attaches great importance to this, has styled the condition "callous stenosis" and says it is an important factor in the prevention of conception. Rohleder believes that the normal cervix to a certain extent aspirates the semen. Effluvium seminus is thought by some to be an important factor in prevention of con-

ception, Bumm stating that if thousands of the spermatozoa, out of the millions deposited at each coition, do not reach the internal genitalia, the chances for conception are slim.

Other causes are tough or unruptured hymen, vaginismus and atresia of the vagina. Any artificial, mechanical or chemical hindrances interposed in the path of the sex cells reduce the chances of fertilization.

The interference with natural processes may cause permanent sterility. This has been shown when one child is born and after a few years have elapsed, the individual is found to be sterile.

Acquired Sterility: Gonorrhea is the most important cause. In women, gonorrhea usually prevents fertility by sealing the ends of the Fallopian tubes and destroying the cilia. Sanger gives as his figures thirty-three per cent of sterility in women is due to gonorrhea. Gonorrheal endocervicitis is the chief factor in one-child sterility.

This is thought due to the fact that a gonorrhea contracted after impregnation ascends to the tubes post-partum, causing a permanent secondary sterility. Lier and Asher found that seventy per cent of sterility in man is due to gonorrhea. In comparing the relative responsibility of sterile marriages, they place the responsibility upon the men at about forty per cent and that of the women at about sixty per cent. The actual moral responsibility of man is greater than these figures would make it appear because a large percentage of gonorrhea in women has been transmitted from husband to wife. In all cases, the male should be investigated and although there are living spermatozoa, their vitality may be too low to produce fertility.

Puerperal sepsis, endocervicitis, endometritis, genital tuberculosis and cystic degeneration are also given as causes of sterility. Acquired misplacements of the uterus may prevent or limit fertility. Tumors of the external genitals, like cysts of Bartholin's glands, vaginal cysts, fibromas of the vulva or vagina, advanced carcinoma or sarcoma of the cervix or vagina may prevent proper coition. Carcinoma in the early stages does not necessarily cause sterility, for instances of cancer associated with pregnancy are occasionally observed and would be seen oftener if cancer did not usually occur later than the child-bearing period.

The influence of the X-ray permanently destroys the follicles of the ovary. M. Frankel has shown that the ovaries of women who have been treated by the X-ray show marked atrophy of the Graafian and ripening follicles as well as a scarcity of primordial follicles. Reifferscheid has shown by animal experimentation that there is no possible regeneration of a follicle that has once been injured by the X-ray. In some instances, it has been noticed that following pelvic treatment by the rays, there is a temporary period of amenorrhea, followed in several months by re-establishment of the normal menses. This is explained by the fact that the X-ray treatment is given only long enough to destroy the riper follicles and is not continued a sufficient length of time to injure the primordial follicles which are more resistant to the ray.

The constitutional diseases that may induce sterility are chlorosis, tuberculosis, diabetes, lukemia, Graves' disease, Addison's disease and nephritis. Tuberculosis and Graves' disease are most commonly productive of trophic changes in the genitalia. Sterility is said to take place in chronic poisoning of morphine, arsenic, alcohol, phosphorus and lead. Leppich, in the study of one hundred alcoholics, found twenty-eight and three-tenths per cent of them unfruitful. Kirsch, Muller and Harrocks state that overnourished women show diminished fertility. It is observed by one writer that, whereas, in thin women one out of every ten is sterile, in fat women an average of four out of ten do not conceive.

After all has been said concerning the pathology of sterility, preventive measures are responsible for the greater percentage of marital fruitlessness. Engelman, in a study of social conditions in the United States, estimated that only twelve per cent of apparent sterility is due to disease. Consanguinity limits fertility. Golherts gives the figures of thirty-two to thirty-three per cent of sterile marriages due to consanguinity as against the average of eight to fifteen per cent.

Diagnosis: A careful history of both man and wife should be taken. In the female, consideration should be given to weight, the breasts, hair distribution, type of pelvis, development of internal pelvic organs, tumors, exudates, evidence of infection of Bartholin's and Skene's glands and presence of bacillus doderlein, examination of the vagina forty minutes after coitus for presence of active spermatozoa.

The Rubin insufflation test has been a great step forward in testing for patency of the tubes. The principle of this method of examination depends upon the injection of gas through the internal os into the uterine cavity under a known pressure. If the tubes are patent, the injected gas will slowly pass through the uterine ostia, along the tube and into the peritoneal cavity. If, on the other hand, the tubes are impermeable, gas will fail to pass. The use of the stethoscope will reveal fine bubbling noises as the gas is escaping from the ostia—this sound is quite characteristic. Rubin always uses X-rays to confirm the presence of pneumo-peritoneum. Rubin and Benedick, in 1927, reported the use of iodized oil in X-ray study of the uterus and tubes. They state that the injection with the oil has its greatest clinical value in the study of sterility in women. In those patients in whom air insufflation has shown tubal occlusion and stenosis, lipiodol injection enabled them to accurately determine the site of obstruction or stenosis, thereby more efficiently judging the question of operation.

Treatment: In addition to diagnosis, Rubin's method also has a therapeutic value inasmuch as smaller delicate obstruction of the tube can be broken down by a pressure of about one hundred fifty mm. Rubin has drawn attention to the value of tubal insufflation as an actual cure of sterility. He communicated to the New York State Medical Association in May, 1925, that out of one thousand consecutive patients insufflated ninety-five had subsequently become pregnant. As these women reported voluntarily, it is likely that a systematic questionnaire would have discovered a greater number.

E. L. Dorsett believes all cases of sterility should have a careful examination and not until the exact cause is ascertained should any method be used. Nonoperative treatment should be tried first. Treat local signs, menstrual symptoms and constitutional make-up, glandular therapy to be used in those cases indicated. Numerous operative measures to cure sterility are practiced dependent upon the pathology present. L. G. Phillips published a series of cases of plastic work on the tubes which was followed by pregnancy in twenty-five per cent of the cases within three years. The operations which he practiced varied from simple salpingostomy to excision of the obstructed portion of the tube and burial of the ampullary end into the uterine wall.

In his series, no pregnancies followed the latter operation. This might bear out to some extent Ashton's statement that the most frequent causes of sterility are tubal in origin. Hirst says that a thorough dilatation of the cervical canal cures more cases of sterility than any other single procedure.

BIBLIOGRAPHY.

1. Raymond F. Metcalf: "Sterility, Its Causes and Treatment." Texas State Journal of Medicine, July, 1924.
2. S. F. London: "Sterility in Women. Diagnosis and Treatment." 1928.
3. W. P. Graves: Gynecology, third edition.
4. S. W. Bandler: Gynecology, fourth edition.
5. Robert T. Frank: "The Problem of Sterility in the Female from Various Aspects." Journal Kansas Medical Society, March, 1924.
6. J. B. DeLee: Obstetrics, second edition.
7. George E. Rehberger, fourth edition.
8. Aleck W. Bourne: "Recent Advances in Obstetrics and Gynecology."
9. E. C. Dudley: "Practical Medical Series," 1919.
10. I. C. Rubin and A. J. Benedick: "Metrosalpingography with the Aid of Iodized Oil." American Journal of Roentgenology and Radium Therapy, April, 1928.

RICKETS*

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Pensacola.

My reasons for presenting a paper on this subject are: first, to help correct the impression that rickets is a disease of under-nutrition; second, to bring to your attention the prevalence of this common disorder of nutrition. Rickets is as common as the every-day cold and is probably responsible for many of them.

In 1924, in order to get some idea as to the incidence of rickets in Pensacola, I tabulated seventy consecutive cases of children under three years of age coming to my office. Fifty-three of the seventy showed clinical signs of rickets, *e. g.*, beading of ribs, enlarged epiphysis, Harrison's Grove, etc. This I think would not be true today as almost every mother is giving her baby cod liver oil.

Rickets has been a clinical entity for over two hundred years but it has only been within the last decade that it has attracted more than passing interest. John Howland probably deserves more credit than any one else for stimulating interest in rickets. He showed that calcium and phosphorus were deficient in all cases of rickets and that rachitic children retain and utilize calcium and phosphorus better when taking cod liver oil than when this oil is withheld.

Alfred Hess of New York showed by X-ray that certain light rays stimulated the healing process in rickets by causing absorption of calcium and phosphorus. He also showed that by ex-

*Read before the Escambia County Medical Society, Pensacola, Feb. 11, 1930.

posing foods such as cereals and oils to these light rays, they were given protective powers against rickets. The above observations have been confirmed by many others. On the contrary, Vitetti concludes that irradiated cholestrol does not have any beneficial influence on experimental rickets in animals.

The discovery of the vitamines added another chapter to the history of rickets. Fat soluble A, which is found abundantly in cod liver oil, was separated into A and D by Shipley and others. It has been definitely determined that lack of D produces rickets.

It is generally accepted that the deficiency of these vitamines, especially D, is the cause of rickets; on the other hand, a few agree with Marfan that chronic infection plays an important part in production of rickets. These food accessories are necessary for metabolism of calcium and phosphorus.

Many mothers have the impression that a rachitic infant is under weight. This is surely wrong. Hess showed in one survey that seventy-five per cent of infants with rickets were either normal in weight or over-weight. I feel that this holds good with the majority of cases I see. In rickets, the usual story is that the baby takes cold easily, often has bronchitis, kicks off bed covers, is easily awakened, sometime with a jump, is nervous, is a poor sleeper, head sweats, etc. The croupy child and those who have convulsions with small provocation should be investigated for rickets. The usual physical signs are: pallor, disturbed sleep, irritability, flabby muscles, enlarged spleen; later, box-shaped head, beading ribs, craniotabes, bow legs, flaring ribs, etc.

Rickets affect every structure in the body—blood, nervous system, muscles, bones, etc. The onset of this disease is probably much earlier than text-books would have us believe. It surely appears at the fourth and probably at the third month. It usually occurs in early spring and is less prevalent in late summer.

Premature infants develop rickets more easily than full-term infants because calcium and phosphorus are laid down in the last two months of intra-uterine life. It is just as negligent to wait for bone deformities before treating rickets as it is to wait for hemorrhage in tuberculosis.

In the prevention of rickets, cod liver oil is the outstanding drug. The greatest objection to its use is the taste. The best results are obtained when it is given early. I make a practice of starting it at two months. I see no objection in giving viosterol along with cod liver oil, and if the patient is unable to take cod liver oil, give the viosterol alone.

In the January, 1930, issue of American Journal of Diseases of Children, Barnes, Brady and James compare cod liver oil with viosterol. They conclude that ninety-five per cent of all cases of rickets are cured with cod liver oil while only forty-four per cent are relieved with irradiated ergosterol. As a curative, sunshine, if obtainable, with cod liver oil (and if not, ultra-violet irradiation with cod liver oil) usually gives the best result. Tetany, spasmophilia and osteomalicia are closely associated with rickets and are usually relieved by anterichitic treatment.

I know of no disorder that is farther reaching in its effects than rickets. It is not directly responsible for death but, indirectly, adds to infant mortality by lowering the resistance of the patient, and is probably responsible for many of the disturbances of late childhood.

GENITAL LESIONS

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Pensacola.

I shall endeavor to give a brief analysis of some of the more common lesions of the genitalia. While I cannot present anything new to you on the subject, I think that some of them are of great importance. I refer to syphilis, which has an important bearing in all lines of practice.

The most frequently observed lesions are herpes progenitalis, balanitis, ringworm, certain types of eczema, chancroids and chancres. Herpes and balanitis are both superinduced by a long foreskin, retained secretions and a careless toilet (especially after intercourse). Herpes presents rather characteristic vesicles or water blisters accompanied by a tingling and itching sensation, and with more or less swelling or edema. It is usually a minor trouble and is amenable to mild antiseptic washes and dusting powders; stearate of zinc is a deserving favorite. Some cases which I have seen were of interest, on account of the great amount of edema present. Organisms are not causative, it being a peripheral neuritis. Circumcision proves an excellent prophylactic for the recurrences. Balanitis of the simpler forms are mild and demand nothing more than a thorough cleansing and a mild antiseptic wash.

There are, however, certain ulcerative or gangrenous types with phimosis, which demand a thorough exposure of the glands, and energetic measures taken lest there be great destruction of tissue. A microscopical examination here shows spirochete and vibrio which is said to be the same as in Vincent's angina. Circumcision is indicated as in herpes, at the proper time. Balanitis of itself cannot develop on an exposed gland. Ringworm and certain types of eczema are found on the genitalia. They are treated the same as when occurring on other parts of the body, although in this region, where there is heat, moisture and friction, it is frequently rebellious to treatment. Scales have the habit, sometimes, of falling down on the feet, starting a new infection, getting under the nails, and adding further to the patient's discomfort.

This brings us to the consideration of the last two infections, chancroids and chancres. They are the most important, the most frequent, and the most confusing; the most important as they demand a differentiation between a local infection (chancroid), and a systemic one, the initial lesion. Not so many years ago, when an individual presented himself with a sore on his genitals, it was considered good practice to treat it locally, waiting until the appearance of the secondary eruption, before specific treatment was instituted. Today, we would be in the same position, were it not for the discovery of the spirocheta pallida and Wassermann. You are thereby enabled after positive findings, to begin treatment at once, a thing of no little moment to your patient.

Classical descriptions of the soft and hard sore, are familiar to all. A chancroid has no period of incubation as it begins as soon as the organism gains entrance. It is a few days, however, before it is likely to be seen. On the other hand, a chancre has a distinct period of incubation, usually two weeks and more after the infectious intercourse, and rarely appearing before the tenth day. Glandular involvement in chancroids are painful, immovable and prone to suppuration. In the chancre they are painless, movable and do not suppurate unless a secondary infection exists. Chancroids are not always multiple, or of a punched-out appearance. Many of them are raised and they are not always soft. Some of them remain hard until sometime after healing. Chancres are not always single, nor much elevated, and when a secondary infection exists, instead of their characteristic clear chancre-juice, you will find plenty of pus also. As a matter of fact, comparatively few chancres fill the bill of specifications of the typical Hunterian sore. After a certain time, all chancres are hard and remain so until dissipated by specific treatment. Chancres are found in extra-genital regions not infrequently and while they are unique, it is not my purpose to discuss them here.

Every genital lesion, unless frankly of no import, deserves a microscopical examination. It is admitted that a trained observer would be correct in his diagnosis, by inspection alone, some of the time, and he would also be wrong many times. I think, under the circumstances, that it is just as well not to let any guess work enter into the case, when you have such a positive means of early diagnosis as the dark field. I have found so many times, the spirocheta pallida in seemingly trivial lesions, that I cannot stress this point too strongly. The two methods employed for the spirocheta are by staining, and the dark field illuminator. The latter I think best as it shows the living organisms with their characteristic movements.

In the examination of your dark field specimen, you will have to distinguish the spirocheta pallida from the spirocheta refringens. The former is built on more slender lines and the spirals are closer. The movements of the two are quite different. The refringens will be seen running across the field at a good rate exactly like a snake. The pallida goes across more leisurely, and at the same time having a distinct rotary motion. Even though your examination proves negative for the spirocheta pallida, it is of distinct value as experience has taught me that it seldom proves to be other than a chancroid. It is well to state here never to cauterize a sore before submitting it to a dark field examination.

I have said nothing so far about the bacillus of Ducre, the organism of chancroid. They are extremely difficult to find and we usually content ourselves with a thorough examination for the pallida and let it go at that.

The purpose which I have striven for in this paper, is to call your attention to the importance of dark field diagnosis in primary lesions, before the Wassermann is useful, the sero-negative stage. I have seen positive findings of the Wassermann delayed for six weeks, which, of course,

is extreme. If you are compelled to wait for a positive Wassermann, you would lose valuable time for the patient, as the sooner the treatment starts, the better. While I have stressed the claims of dark field examination, I am perfectly well aware of the splendid work done by the Wassermann, throwing as it does, figuratively if not literally, light on many phases of obscure syphilis.

SOME IMPRESSIONS AND OBSERVATIONS REGARDING BLOOD PRESSURE*

C. C. Webb, M.D.,
Pensacola.

There is, perhaps, no subject in clinical medicine or surgery upon which more confusion exists, in the mind of the physician and laity, no modern adjunct to diagnosis which continues to be more misunderstood and misapplied, than BLOOD PRESSURE.

I am reminded of the story told of a representative of an English milling firm, when he was sent to this country to study the wheat market. His company, soon after the agent's arrival, cabled him for his and the trade's view of the situation. His reply was as follows: "Some think it will go up, some think it will go down. I do, too. Whatever you do will be wrong. Act at once." This, to my mind, somewhat characterizes present-day thoughts of blood pressure.

I do not pose as an authority on blood pressure and these thoughts are to be construed as being only an endeavor on my part to enter into a clear and intelligent correlation and interpretation of blood pressure findings, so that this valuable aid in diagnosis may be sanely and satisfactorily used.

Authorities agree that the word "pressure" is a misnomer, that "tension" would be a better term. When we analyze the physics, we find that it really is a blood tension instead of a pressure, because when force is exerted by one body upon another, which offers no resistance, the former simply transmits to the latter all of its motion; no tension is made between the two forces. On the other hand, half the same amount of force divided between the two bodies, and exerted one against the other, will develop a tension which can be felt, if interposed between the bodies. So the blood pressure is the product of the force of the heart's muscle contraction, and the resistancy of the blood vessels, manifested through the fluid blood which lies between the two elements.

Two methods of determination are now used, palpation and auscultation, but the latter is the method of choice. The technique is well known and attention is only called to the four phases of the process to refresh our memory: 1. The phase of silence signifies actual collapse of the vessel; 2. The phase of indistinct irregular sounds has no clinical significance; 3. The phase of sharp, clicking sounds denotes systolic pressure; 4. The phase of soft, blowing sounds denotes diastolic pressure.

The normal blood pressure varies several millimeters, both diastolic and systolic, in different individuals, so that only an approximation for the average can be given. Also, age is to be considered, due to the gradual loss of elasticity of the arterial walls and the increase of the heart muscle which compensates for the rise in resistance.

The old adage, "100 plus the age", is, as we know, erroneous and we are inclined to follow the following table:

AGE.	NORMAL SYSTOLIC RANGE			NORMAL DIASTOLIC RANGE		
	Min.	Average.	Max.	Min.	Average.	Max.
15-20...	106	118	130	71	79	87
20-25...	110	122	134	73	81	89
25-30...	112	124	136	75	83	91
30-35...	113	125	137	76	84	92
35-40...	114	126	138	77	85	93
40-45...	115	128	141	78	86	94
45-50...	117	130	143	79	87	95
50-55...	118	132	146	80	88	96
55-60...	120	134	148	81	89	97
60-65...	122	136	150	83	91	99

Females usually have a slightly lower normal pressure than males.

It will be seen that the difference between systolic and diastolic determinations, which is known as the pulse pressure, widens each year, because the systolic pressure increases by a greater ratio than does the diastolic.

There are most certainly physiological variations of one's own blood pressure, but it is raised by anything which increases either the force of the heart beat or the resistance in the blood vessels, or both; consequently, it is lowered by anything which decreases either of these factors. Elevations are brought about through increased heart action, physical exertion, mental excitement and other external stimuli, but subside quickly when the cause is removed. This type of increased tension is noted almost wholly in the

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systolic phase and is really an increase in the pulse pressure.

Pathological variations follow from some cause, and may be explained as due to four clinical classes of disease such as: 1. Acute toxemia. 2. Chronic toxemia. 3. Endocrine disturbances, and 4. Nervous diseases.

Many of the milder and more transient acute toxemias produce no marked change; a common cold does not raise it, nor do slight intestinal infections reduce the blood pressure, but in more severe diseases involving these same tissues, increased or decreased blood pressure is a constant and valuable symptom.

An increase in blood pressure is noted in tonsillitis; rheumatic fever; pneumonia; meningitis, except tuberculous; scarlet fever; and measles. Just as markedly it is lowered in typhoid fever, acute miliary tuberculosis, influenza, diphtheria and severe acute intestinal disorders. It must not be heralded as a primary diagnostic symptom but when observed, its greatest value is a secondary one, that of the indication of the condition of the kidneys and the heart respectively. In a sudden rise, one must suspect kidney complications or acute nephritis, due to congestion and stasis of the renal vessels; falling suddenly, without subsidence of other symptoms, suspect a weakening and failing heart muscle.

In chronic toxemias, all but two play prominently in the increase of both diastolic and systolic readings. Malignancy and tuberculosis are the exceptions, unless they are connected with a kidney or endocrine complication, when we may find the pressure elevated. Syphilis, gall-bladder disturbances, chronic tonsillitis, sinusitis, pyorrhea, prostatitis, autointoxication, and many others contribute to increases in readings.

Endocrine disturbances have been blamed for many things in physical ailments and probably do play a far more important part than we know at this time. We do know that disturbances of the secretion of the adrenal, pituitary, testicle and ovaries, tend to increase blood pressure while the thyroid and pancreas tend to lower it. However, since the thyroid and ovary are the most common offenders, allow me to state that in hyperthyroidism, with excessive secretion of this gland, there is a lower pressure because the secretion overbalances the ovary and pituitary, but in degenerated or cystic thyroids with deficient secretions, the blood pressure is raised because of the overbalance of the ovary and pituitary. It is not within the scope of this paper to take up in detail the enormous subject of endocrinology.

Nervous diseases, especially the neuroses, frequently play pranks with blood pressure through their influence upon the sympathetic nervous system. Suffice to say, here, that every case of high and low blood pressure has in it a certain nervous element and if this is removed, there will be evidence of return to normal, of the readings.

Now, what are we going to do about it all? Look for the cause, eliminate it if possible, console the patient, advise as to habits and dietary, and return to my original story of

"Some think it will go up, some think it will go down. I do, too. Whatever you do will be wrong. Act at once!"

BRONCHIAL ASTHMA*

C. J. Heinberg, M.D.,
Pensacola.

The less that is known about a subject, the more voluminous is the literature, in an attempt to bring forth the light of truth whether in medicine or in other fields. One eminent physician once said to a student who was "beating about the bush" in an attempt to answer his query, "Doctor, the reason so much is written and said about religion, is because no one has ever seen God." So, as no one has seen the absolute in asthma, much is written and said about it, and this article is just one of another series of observations!

It is generally agreed that asthma is still an enigma to the profession. At a recent society meeting, I heard five physicians give as many different reasons for the cause and treatment of bronchial asthma. There is some underlying cause for this widespread disagreement on the subject and the reason is that our knowledge is just as varied as the opinions given on the cause and therapy: the patient wheezes right along as a result. It is because of this widespread difference of opinion that the author is presenting this paper in an attempt to give some rationale of therapy.

Anyone of you who has seen a patient gasping for breath, is aware of the feeling of utter helplessness, and eagerly tries any new treatment when confronted by this malady.

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Epinephrin has been our sheet anchor with the recent addition of ephedrine. We have only been able to treat symptomatically and let the causal factor remain undetermined. The last few years have brought the fruit of much research and now a cure is our aim where relief from spasms was all we could do formerly.

The very definition of asthma is a disputed question. However, I prefer the definition by Cook[1] that bronchial asthma is a condition characterized by dyspnea, both inspiratory and expiratory, due to bronchial spasm and edema of the bronchial mucous membrane. It may be acute, subacute or chronic. He further states that the term "bronchial asthma" should be restricted to that condition which is the result of an allergic reaction.

ETIOLOGY.

Asthma must be considered a symptom induced by

I. Allergic.
- A. By inhalation
 1. Animal dander
 2. Pollens
 3. Sachets and perfumes
- B. By ingestion
 1. Food
 2. Drugs
- C. Absorption from a focus
 1. Bacterial proteins

II. Non-Allergic.
1. Chronic bronchitis
2. Emphysema
3. Tuberculosis
4. Cardio-renal
5. Thymic enlargement
6. Enlarged bronchial glands
7. Reflex bronchospasm—Thermic asthma, etc.
8. Acute bronchitis

Under this classification, the allergic have been the salient cause in our cases, and, I believe, is, in the vast majority of cases, the major causal factor.

All our cases are tested for animal emanations and pollens. If any positives are found they are at once eliminated. This solved one of our obscure problems as in the case of H.G. given in the case reports.

To Dr. Allen Eustis is due great credit for his work on histidin. Dr. Eustis[2] experimentally produced asthma in a normal person by injecting histidin and was able to control it by detoxicating it with buzzards' liver. The presence of indican in the urine of asthmatics is indicative of protein putrefaction in the intestinal tract, with subsequent absorption of amino acids (histidin) which the individual is unable to detoxicate. These toxins, eliminated in the terminal bronchioles, induce the bronchial spasm. To these patients an animal protein-free diet is given and the urine watched for indican. Protein in the form of acidolpholus buttermilk, beans, and peas is allowed to prevent pellagra. All of these patients are examined for focal infections which, when found, are corrected.

The most common foci of infection are sinuses, teeth, tonsils and intestinal tract. In one of our cases a cholecystitis was found. It has been observed that a majority of asthmatics have concurrent sinus infections. As an otolaryngologist, I leave the sinuses to the last in searching for a cause, and refer the patient to the laboratory for pollen and protein tests, and urinalysis first—for it is my belief that many of the sinus infections are secondary due to the edema of the nasal mucous membranes along with the rest of the respiratory tract. This boggy membrane offers an exceptionally fine media for bacterial growth. The sinus infection lowers the general health and increases the susceptibility to allergy.

When the sinus is drained (and all infected sinuses should be) the improvement in general health improves the asthma, but in few does it cure a true bronchial asthma. Only when the allergic cause is removed does the patient have complete relief. Skillern[3] puts paranasal sinuses as least likely common foci of infection. Some of the older authors who classified nasal polypi and chronic ethmoiditis as predisposing causes of asthma, little realized what valuable information that is now. In all cases where other sources of allergy are ruled out, we believe that the blood proteins, changed through inflammatory processes and then reabsorbed, cause a true allergy. Sinuses which drain give less systemic results; a closed cavity with no drainage acts as an incubator; here the blood proteins are changed by bacterial action and reabsorbed as a foreign protein. In this type, ventilation of the sinuses gives results.[4] Occasionally, a patient with asthmatic history consulted the rhinologist for intercurrent infection, after which infection was cured, the asthmatic symptoms did not recur. The route of absorption from the sinuses is via the lymphatics

to the internal jugular, submaxillary, and occasionally, the retrosternal nodes to the lymphducts, right side of the heart, to the lungs. Alveolar abscess is another source of infection and should never be neglected.

TREATMENT.

The modus operandi of our treatment of asthma is as follows:

1. Complete history and examination.
2. Refer for complete laboratory examination.
3. Correction of any abnormalities of the nose, throat or teeth.
4. Cooperative treatment with pediatrician or internist where food allergy is determined, or where non-allergic cause (such as enlarged thymus, etc.) is suspected.

CONCLUSIONS.

1. Asthma should not be treated symptomatically only, but an effort made to learn the cause and eliminate it.
2. Asthma is allergic or non-allergic, the former being, by far, the most frequent.
3. Focal infection is a common source of allergy.
4. Protein putrefaction, as evidenced by indicanuria, should never be overlooked.
5. Cooperation between rhinologist and internist, or pediatrist, is necessary.

CASE REPORTS

C. P., white female, age 16 years. Asthma for two years. Nose blocked up a lot. T. and A. one year ago following diphtheria. Examination shows right maxillary and ethmoid sinusitis and left frontal, ethmoi-maxillary sinusitis. Dowling tamponades and gross suction relieved and attacks lessened. Urine negative. Sensitization test—beef *. Eliminated from dietary. For three months the nasal packs and suction gave mild relief but only after a complete sinus exenteration was the patient completely free. She has been well now for over a year.

H. G., white male, age 6 years. Asthma for two years, becoming progressively worse. Whooping cough at one year of age with cough and cold since. Tonsillectomy and adenoidectomy at two years. Examination shows dullness both antra on transillumination—confirmed by X-ray. Treatment by Dowling tamponade and gross suction instituted with minor relief. Pollen and protein sensitization tests in December, 1925, showed:

Corn * * * *
Horse Dander * * * *
Clover * * * *

W.B. 9,500, R.B.C. 100,000, H.B. 85%, Poly. 60%, etc. Removal of a horse hair mattress from the child's bed gave an immediate cessation of asthma which has not recurred to date, in spite of the fact that the maxillary sinuses are still draining. Operation for relief of this was refused.

C. W. D., a physician, age 47 years, has had asthma for 31 years. Examination reveals bilateral ethmoiditis and chr. fo. tonsillitis. Tonsillectomy was done and Dowling tamponades and suction treatment of sinuses instituted. Relief was transient. Patient consulted Dr. Eustis who found a cholecystitis with hepatic enlargement and a severe indicanria. Dr. Lynch pronounced the nose and throat free from any focus of infection. Protein free diet started with temporary relief. Condition aggravated by spring hay fever due to Bermuda grass. This patient has not had very much relief from his asthma, adrenalin by hypodermic still being necessary at intervals.

M. P., white male, age 4 years. Asthma for two years. For past three months has been more or less continuous. Transillumination shows right antrum dull. Dowling tamponades and suction gives pus from antrum. Urine shows indican in quantity. Given animal protein free diet and treatments of sinus. Asthma ceased when diet started, with no recurrence. Sensitization tests show sensitization to oatmeal, eggs and pork. With elimination of these articles from diet, asthma has not recurred.

M. E., white male, age 4 years. Asthma for one year. Came on after whooping cough. Chronic nasal catarrh. Right ethmoiditis and maxillary sinusitis. Dowling tamponades and suction. Asthma relieved. Chr. fol. tonsillitis and adenoid hypertrophy. Operation to be done when consent is obtained. No indicanuria. Patient has been free from asthma for four months.

BIBLIOGRAPHY.

1. Robert Cook: "Bronchial Asthma." Tice Prin. and Pract. Med., Vol. V.
2. Allen Eustis: "Further Experiences in Dietetic Treatment of Bronchial Asthma." Sou. Med. Jour., May, 1916.
3. Ross Skillern: American Lar. Oto. and Laryn. Soc., 1926.
4. M. A. Lischkoff: "Bronchial Asthma and Its Relation to Sinus Disease in Children." Jour. Fla. Med. Asso., March, 1927.



Aerial photograph of San Carlos Hotel (center), Convention Headquarters.

Pensacola, The Convention City

Pensacola, where modern progress blends with a background of tradition and history, will welcome members of the Florida Medical Association when the association holds its convention.

Pensacola is the busy metropolis of West Florida, more or less the center of a section which is distinctive in its features of geography, industry and agriculture. Delegates from other parts of the state who have never seen West Florida will find a trip to the Pensacola convention to be a revelation in many ways.

The national government has recognized Pensacola's strategic importance and the city and harbor are protected by the long range guns of Fort Barrancas, one of America's most important coast artillery forts. The United States naval air station, not far from Fort Barrancas, trains hundreds of future airmen each day and it is a common sight to see formations of from ten to fifty planes above the city at one time.

Pensacola, with its coast artillery and its air station, has a distinctly military atmosphere but visitors are always welcome to these points of interest and no barriers are erected against those who wish to see future aviators in training and to hear the big guns roar at Fort Barrancas.

Pensacola is rich in historical background. In the historic plaza on which fronts the city hall, the flags of five nations have changed hands in the bloody years of the nation's early history. French, Spanish, English, the Confederate States and the Federal government have at different times ruled in Pensacola.

Palafox street, the city's main thoroughfare, rises by a hill to the highest point in the community. At this point is the city's beautiful high school, fronting on Lee square. And across the street is the site of old Fort George, now occupied by the Knights of Columbus building. It was here that the Spanish, Indians and English at

times past fought for this commanding section of the territory.

Pensacola is proud of her harbor which admits the greatest of ocean-going vessels. Docks extending out into Pensacola bay make it convenient for shipping which has always been one of the city's biggest factors and which is showing a steady growth in recent years.



The Pensacola Hospital

Across the bay is being built a two-million-dollar bridge which will provide a short route to Camp Walton, Panama City and other important resorts and cities in West Florida. This bridge will open to settlement and pleasure resorts the beautiful tracts on Santa Rosa peninsula, a finger of land which extends far into the bay.

Fishing is one of Pensacola's major industries and the picturesque boats of the red snapper fleets will prove of interest. These schooners with their busy crews go far into the gulf, some almost to the coast of Mexico, to catch red snapper and bring this choice fish to Pensacola where it is iced and shipped north by barrels and car lots.

The convention will be held in the San Carlos hotel, the city's main hostelry and ideally located in the center of Pensacola's business district. The hotel provides ample accommodations and comforts.

Pensacola prides herself on her hospitality and this will be exhibited in varied ways to the convention delegates.

Members and guests of the Florida Medical Association who are contemplating attendance at the Fifty-Seventh Annual Convention in Pensacola, May 6th and 7th, are urged to make their reservations early. Much better service and attention will be received by notifying the hotel manager, specifying the day and time of arrival in Pensacola.



A part of Fort San Carlos with Naval Air Station in Distance.

PROGRAM

of the

FIFTY-SEVENTH ANNUAL MEETING

of the

FLORIDA MEDICAL ASSOCIATION, Inc.

TO BE HELD AT PENSACOLA, FLORIDA

MAY 6th and 7th, 1930

INFORMATION.

Information desk will be located in the lobby of the San Carlos Hotel with continuous service throughout the meeting. All members will be required to register and secure identification badges before attending any of the sessions. Guests and ladies are requested to register. Tickets for the banquet, Tuesday evening, May 6th, may be obtained at the registration desk.

PROGRAM OF ENTERTAINMENT.

Monday, May 5th.

8:30 p.m. Informal Smoker—Banquet Hall, San Carlos Hotel.

Tuesday, May 6th.

Boat, Sight-seeing trip, Pensacola Bay to Naval Air Station, Naval Hospital and Fort Barrancas.

Automobile Trip through City and Scenic Highways to the Naval Air Station and Fort Barrancas, under the auspices of the Chamber of Commerce.

1:00 p.m. Rotary and Lions' meetings at the San Carlos Hotel.

8:30 p.m. Annual Banquet, San Carlos Hotel. (Cover charge, $3.00).

Wednesday, May 7th.

9:00 a.m. Golf Tournament at the Pensacola Country Club.

1:00 p.m. Kiwanis and Civitan luncheons. Kiwanis luncheon at San Carlos Hotel. Civitan luncheon at Christ Church Parish House

ENTERTAINMENT FOR LADIES.

Headquarters: San Carlos Hotel.

Monday, May 5th.

8:30 p.m. Card party at San Carlos Hotel.

Tuesday, May 6th.

Boat and automobile sight-seeing trips to Naval Air Station, Naval Hospital and Fort Barrancas; Scenic Highway and through City under auspices of Chamber of Commerce.

4:00 to 6:00 p.m. Reception and tea at Pensacola Hospital for wives of members of the Florida Medical Association.

8:30 p.m. Annual banquet at San Carlos Hotel. (Cover charge, $3.00).

Wednesday, May 7th.

10:00 a.m. Meeting of Woman's Auxiliary, San Carlos Hotel.

1:00 p.m. Luncheon at Cherokee Tea Room.

1:00 p.m. Luncheon of Pilots.

HOTELS.

San Carlos Hotel, Convention Headquarters. (Special Rate American Plan).....$6.00

Manhattan Hotel (European Plan).....$1.50 and up

TECHNICAL EXHIBITS

Technical exhibits will be located in booths on mezzanine floor, San Carlos Hotel.

The technical exhibits have a real scientific value and physicians who wish to keep abreast of the times and know the latest in drugs and medical appliances should spend some time with these exhibits. It will be surprising the great amount of useful information that can be procured at these exhibits. Many have nothing for sale, the representatives of the firms being there to give the latest information regarding their products. Those who have items for sale will gladly give information whether there is a purchase or not. Be sure to visit the Technical Exhibits. The following firms have arranged for exhibits at the Pensacola meeting:

American Optical Co.
Gerber Products Division.
General Electric X-ray Corp.
Guyer X-ray Co.
Lederle Laboratories.
Mead-Johnson & Co.
C. V. Mosby Co.
Petrolagar Laboratories.
E. R. Squibb & Sons.
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W. D. Nobles — C. W. D'Alemberte

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Mrs. C. C. Webb

FIRST GENERAL SESSION

MAY 6TH, 10 A. M.

Call to order, W. C. Payne, Chairman of Committee on Local Arrangements.
Invocation, The Reverend J. E. Northcutt, Pastor, First Methodist Church.
Address of Welcome on Behalf of Escambia County Medical Society, Carol C. Webb, President.
Address of Welcome on Behalf of the City of Pensacola, The Honorable J. Harvey Bayliss, Mayor.
Response, Herrman Harris, Jacksonville.
Announcements.
Address of President, "Medical Education of the Laity," Henry C. Dozier, Ocala.
Address (by invitation), "The Correlation of the Urinary Findings and the Renal Pathology in Experimental Streptococcal Nephritis," Chas. Duval, New Orleans.

SECOND GENERAL SESSION

MAY 6TH, 12:15 P. M

President Dozier in the Chair.
Report of Officers:
- Secretary-Treasurer-Editor, Shaler Richardson.
- Executive Committee, Gerry R. Holden.
- Committee on Legislation and Public Policy, Herman Watson.
- Hospital and Medical Education Committee, John E. Boyd.

SCIENTIFIC ASSEMBLY

SAN CARLOS HOTEL.

MAY 6TH, 2 P. M.

Committee on Scientific Work: Ernest B. Milam, Jacksonville, Chairman; T. H. Bates, Lake City; M. J. Flipse, Miami.

Attention is called to the following By-Laws:

"All papers read before the Society shall be its property. Each paper shall be deposited with the Secretary when read."

"No address or paper before the Association, except those of the President and Orators shall occupy more than fifteen minutes in its delivery, and no member shall speak longer than five minutes, or more than once on any one subject."

Drs. Cunningham and Shaw have offered their projecting lantern and daylight screen. Essayis s desiring to present lantern slides are asked to communicate before the meeting with Dr. J. M. Hoffman, Pensacola, Florida.

1. "A Comparative Study of Prophylaxis and Therapy of the Acute Infections of Florida Children," William McKibben, Miami.

 The prevention and treatment of the more common infectious diseases in the south, the north, England, and Continental Europe, briefly compared Therapy in common, and peculiar to each, are considered, embracing drugs, vaccines and serums, of proven value only. Also physical and chemical antipyretics, diet, rest, hydrotherapy, stimulants and nursing.

 Discussion: Wm. E. Sinclair, Orlando; Geo. Cook, Tampa.

2. "Auricular Fibrillation," Spencer A. Folsom, Orlando.

 Sixty to seventy per cent of all cases of serious heart failure owe it directly to this condition or have the failure aggravated by its presence. Sixty per cent of fibrillators belong to the rheumatic group. It is the most common of the irregularities. If the integrity of the myocardium is good, the prognosis is good. Quinidine is effective and should not supplant digitalis but be used as a supplement.

 Discussion: William Blake, Tampa; T. Z. Cason, Jacksonville.

3. "Laboratory Examination of Surgical Tissue" (With Lantern Slides), Clayton E. Royce, Jacksonville.

 The importance of laboratory examination of surgical tissue from the standpoint of: the patient; the surgeon; the pathologist; the hospital. The method of examination, as to entire specimen; as to microscopic study of selected portions. Records: descriptive of both gross and microscopic appearances leading to and supporting an anatomical diagnosis; material records histological preparations; photographs as substitutes for gross specimen; photomicrographs to emphasize important histologic detail. Histological methods from the standpoint of: rapidity, accuracy, permanence. Laboratory examination of surgical tissue improves the accuracy of diagnosis and prognosis, completes the patient's record and is of continuous educational benefit.

 Discussion: Herbert R. Mills, Tampa; Henry Hanson, Jacksonville.

4. "Insomnia," H. Mason Smith, Tampa.

 Definition of sleep. Factors influencing sleep and theories as to the cause. Sleep center has been localized by pathological process of encephalitis. Several causes of functional disturbances.

 Discussion: Ralph N. Greene, Jacksonville; W. H. Spiers, Orlando.

5. "Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis," M. J. Flipse, Miami.

 Review of history, indications, contraindications, presentation of case report with lantern slides.

 Discussion: T. Z. Cason, Jacksonville.

6. "Spider Poisoning," Henry E. Palmer, Tallahassee.

 Description of Genus Latrodectus Mactan, or Black Widow Spider, and its venom. Symptoms. Treatment. Resume of Personal Experience.

 Discussion: L. S. Oppenheimer, Tampa; J. H. Pierpont, Pensacola.

7. "Ophthalmoscopic Diagnosis as Pertains to General Medical and Surgical Conditions" (with lantern slides), Shaler Richardson, Jacksonville.

 Examination of fundus oculi is an important part of general medical and surgical diagnosis and should be more generally used. Numerous lantern slides of fundus lesions relating to general diseases will be shown, together with a description of actual pathology occurring in these conditions.

 Discussion: M. E. Quina, Pensacola; C. J. Heinberg, Pensacola.

MEETING OF HOUSE OF DELEGATES

MAY 6TH, 5 P. M.

Roll Call and Seating of Delegates.
Adoption of minutes as published in April, 1929, Journal.
Action on Amendments Proposed Last Year.
1. Hospital and Medical Education Committee.
2. Honorary Membership.
3. Nominating Committee.

Election of one delegate and one alternate to A.M.A. meeting (two-year term).
Selection of meeting place of Association for 1931.
Ratification of charter, Lake-Sumter County Medical Society.
Reading of resolutions.
Announcements.
Adjournment.

SCIENTIFIC ASSEMBLY
MAY 7TH, 9 A. M.

8. "Newer Methods in the Treatment of Nisserian Infection in the Female," J. M. Bryant, Jacksonville.

 A preliminary report. End results small series consecutive cases Nisserian infection in females. Treatment by electric cautery and diathermy demonstrates superiority this method. Surgical removal specific pyosalpinges unnecessary procedure in majority cases.

 Discussion: Ferdinand Richards, Jacksonville.

9. "Per-Oral Endoscopic Removal of Foreign Bodies," S. B. Forbes and J. W. Taylor, Tampa.

 Technique used in removal of foreign bodies from air and food passages. Methods used in diagnosis and bronchoscopic treatment of lung abscesses. Lantern Slides.

 Discussion: Bundy Allen, Tampa;
 M. A. Lischkoff, Pensacola.

10. "Acute Pancreatitis from a Diagnostic Standpoint, with a Report of Three Cases," William W. Massey, Quincy.

 Few diseases are as puzzling and so often as rapidly fatal as is acute pancreatitis. Few diseases require as prompt surgical consideration as does acute pancreatitis. The importance then of reviewing the essentials of this affection, and of differentiating it from the several others which it so closely simulates is self-evident. Case reports.

 Discussion: E. B. Milam, Jacksonville;
 J. Knox Simpson, Jacksonville.

11. "Skin Grafting," L. A. Peek, West Palm Beach.

 Skin grafting in cases with large areas burned. Problems of obtaining sufficient skin for graftings. Denuding patient in poor condition important problem. Other sources such as sudden deaths, amputations, birth material too infrequent to be considered. Public appeal often necessary and responses usually prompt. Technique of handling patients and donors. Outline of management of patient, dependent upon nature of injuries and areas involved.

 Discussion: Leigh F. Robinson, Fort Lauderdale.

12. "Filariasis in Southern Florida. Case Report," E. Sterling Nichol, Miami.

 Incidence of filariasis in southern Florida. Description of usual symptoms. Methods of diagnosis. Probability of undiscovered cases. Treatment. Case report.

 Discussion: Henry Hanson, Jacksonville.

13. "A Review of Some Cases of Obstruction of the Bowel with Partial Study of Writer's Own Work," J. S. Turberville, Century.

 A few general remarks regarding obstruction of the bowel with a statistical study of the writer's own work. General comments.

 Discussion: W. C. Payne, Pensacola;
 J. C. Davis, Quincy.

14. "Free Tendon Grafts in the Fingers. Report of Case," Kenneth A. Morris, Jacksonville.

 In the late repair of tendons in the fingers, it is necessary in the majority of cases to make use of free tendon grafts. The most important requisite for successful tendon grafting is the restoration of the gliding mechanism as explained by Leo Mayer and Biesalski. A case is reported of a young man who was refused admittance to the army because he could not pull the trigger of a gun with his right index finger. The flexor tendons had been destroyed by a tendon sheath infection ten years previously. Function was restored by using a free tendon graft from the Palmaris Longus muscle in the forearm.

 Discussion: Edward Jelks, Jacksonville;
 Harold D. Van Schaick, Jacksonville.

THIRD GENERAL SESSION.
MAY 7TH, 12 M.

President Dozier in the Chair.
Election of President.
Newly elected President escorted to the Chair.
Election of first vice-president.
Election of second vice-president.
Election of third vice-president.
Election of secretary-treasurer.
Presentation of past-president's button.
Adjournment.

SCIENTIFIC ASSEMBLY.
MAY 7TH, 2 P. M.

15. "Some Considerations of Blood Transfusion. Report of a Fatality," George W. Richardson, Jacksonville.

 Evolution of blood transfusion. Methods in use at present. Type of case benefited by blood transfusion. Dangers. Report of case. (Death from air embolism of brain).

 Discussion: Kenneth Morris, Jacksonville;
 Wm. W. Kirk, Jacksonville.

16. "Sex and Symbolism in Religion," Daniel C. Main, Crescent City.

 Value of proper sex knowledge. Questionnaire from Psycological Laboratory of Johns Hopkins and answers from physicians. Freud's attitude toward religion. Early religious symbolism. Changes with advent of Christian religion. Three case reports.

 Discussion: G. H. Benton, Coral Gables.

17. "Rational X-Ray and Radium Therapy," Walter A. Weed, Lakeland.

 A brief resume of the history of X-ray and radium treatment. Fallacies and inconsistencies, past and present. Indications and contraindications. Technique. Results, absolute and relative. Comments.

 Discussion: W. McL. Shaw, Jacksonville.

18. "Luetic Heart Disease with Case Report," Herbert Caldwell, Lake City.

 A short discussion of luetic heart disease, time of incidence, location in the heart, failing myocardium, and treatment, with X-rays of case showing value of lateral views of chest.

 Discussion: Herrman Harris, Jacksonville;
 Louie Limbaugh, Jacksonville.

19. "Further Observations on the Control of Subcutaneous and Mucous Membrane Hemorrhage by Splenic Irradiation with Radium," J. M. Hoffman, Pensacola.

 Review of literature. Technique of application. Case reports. Summary. Conclusions.

 Discussion: H. L. Bryans, Pensacola;
 W. C. Payne, Pensacola.

20. "Two Aspects of Hypertension" (with lantern slides), M. J. Myres, Daytona Beach.

 Causes of Hypertension. Historical summary. Mechanical friction. Electrical friction. Therapeutic application. Action of blood pressure cuff. Cheyne Stokes' breathing. Summary.

 Discussion: Eugene Peek, Ocala.

21. "Malaria Control," F. A. Brink, Jacksonville.

 The prevalence of malaria in Florida has always been and still is one of the most important problems of the State Board of Health. From an economic standpoint, it means much to the State. The paper will deal with conditions necessary for malaria transmission, control measures, control of mosquito breeding, and methods of screening to prevent access of mosquitoes to humans. A review of the State Board of Health program will be given.

 Discussion: L. M. Anderson, Lake City;
 B. C. Wilson, Jacksonville.

MEETING OF ROENTGENOLOGISTS.

A special program has been arranged for the benefit of doctors interested in roentgenology. Informal sessions will be held at the San Carlos Hotel, Pensacola, beginning 10 a.m., May 5th. Dr. Bundy Allen of Tampa will address the gathering.

NOTICE: Application has been made for convention rates in connection with the Fifty-Seventh Annual Meeting of the Florida Medical Association at Pensacola. Inquire of your ticket agent before purchasing ticket.

PROGRAM OF THE ELEVENTH ANNUAL MEETING OF THE FLORIDA RAILWAY SURGEONS' ASSOCIATION

San Carlos Hotel, Pensacola
May 5, 2 p. m.

ENTERTAINMENT

8:30 p.m. Informal Smoker, Banquet Hall, San Carlos Hotel.

OFFICERS, FLORIDA RAILWAY SURGEONS' ASSOCIATION

President, Harold D. Van Schaick.....Jacksonville
Vice-President, W. E. Burnett.....St. Augustine
Secretary-Treasurer, E. W. Warren.....Palatka

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M. E. Quina.....Pensacola
C. C. Webb.....Pensacola
F. G. Renshaw.....Pensacola

GENERAL SESSION

San Carlos Hotel,
May 5, 2 p. m.

Chairman Committee on Arrangements, J. H. Pierpont, Pensacola.
Invocation, The Reverend G. H. Rousseau, First Baptist Church, Pensacola.
Address of Welcome, Frank G. Renshaw, District Surgeon, L. & N. Ry., Pensacola.
Response, L. M. Anderson, Lake City.
President's Address, Harold D. Van Schaick, Jacksonville.

SCIENTIFIC PROGRAM

Address: R. A. Woolsey, M. D., Chief Surgeon Frisco Railroad.

"A Discussion of General Principles Underlying Diagnosis and Treatment of Fractures," J. S. Turberville, Century.
A general discussion of the subject of fractures and a plea for more attention to good functional results, instead of a great and oftentimes harmful effort at perfect anatomical restoration. A warning word against the too general use of manufactured appliances. A plea for more general use of "horse sense", and the use of carpenters' tools for making and shaping retention apparatus. The advantage in the use of X-ray and fluoroscope in studying and adjusting broken bones. A discussion of some points in the management of special fractures.
Discussion: H. A. Walker, Hollywood;
H. E. Palmer, Tallahassee.

"Fractures of the Outer End of the Clavicle—Simple Dressing," G. H. Edwards, Orlando.
Causes; description; X-ray pictures of fracture; pictures of dressing; description of and technique of application.
Discussion: C. D. Christ, Orlando;
B. F. Barnes, River Junction.

"Roentgen Technic of the Examination of the Spine," H. B. McEuen, Jacksonville.
Brief description of Roentgen technique of spine examination to disclose fracture of any portion of vertebrae in question and presentation of lantern slides, demonstrating films made by technique described.
Discussion: R. N. Greene, Jacksonville;
T. M. McDuffee, Manatee.

"Gun Shot Wound of the Tibia," Z. Brantley, Grandin.
Brief description of the histological structure of long bones, with general description of tibia and with special reference to blood supply. Operation and treatment with complete cure.
Discussion: E. W. Warren, Palatka;
G. C. Tillman, Gainesville.

"Non-Union of Fractures," J. D. Bell, Pensacola.
Discussion: Henry C. Dozier, Ocala;
T. H. Bates, Lake City.

PAST PRESIDENTS FLORIDA MEDICAL ASSOCIATION, INC.

1874—
1875—
1876—
1877—
1878—
1879—
1880—
1881—
1882—
1883—
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1926—Dr. H. Mason Smith, Tampa.
1927—Dr. John A. Simmons, Miami.
1928—Dr. F. J. Waas, Jacksonville.
1929—Dr. Henry C. Dozier, Ocala.

*Deceased.

Note: Please submit information to complete the above list.



DR. CHARLES W. DUVAL, OUR HONOR GUEST

Fortunate, indeed, are the members who will attend the Pensacola meeting of the Association in that there is in store for them the pleasure of hearing Dr. Charles W. Duval, Professor of Pathology and Bacteriology of the School of Medicine, Tulane University, New Orleans, in a discourse on "The Correlation of the Urinary Findings and the Renal Pathology in Experimental Streptococcal Nephritis."

Dr. Duval was born in Annapolis, Maryland, where he received his preliminary education. He secured his B.A. degree from the St. Johns College, Annapolis, in 1897 and in 1909, an honorary Master's degree. He graduated in medicine from the University of Pennsylvania in 1903 and took post-graduate training in pathology under Professors Councilman and Mallory, Harvard Medical School, Boston, Mass. He served an internship at the Boston City Hospital in 1903 and 1904 and became first assistant in pathology of Harvard University under Professor F. B. Mallory in 1904, which position he held until 1906. From 1907 to 1909, Dr. Duval was lecturer and assistant professor of pathology, McGill University, Montreal, Canada, and also director of the Pathological Laboratories, Montreal General Hospital. He is a member of the leading societies of pathology and bacteriology in the United States—to-wit: Society of Experimental Pathology; Association of Pathologists and Bacteriologists; American Society of Bacteriology; Society of Experimental Biology and Medicine; American Society of Tropical Medicines; American Public Health Association, and the American Medical Association. He has contributed extensively to medical literature on acute bacillary dysentery; summer diarrhea in infants; tuberculosis; glanders; pneumonia; meningitis; leprosy; scarlet fever; measles; cancer; experimental nephritis, etc.

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Contributions for publication in this journal, whether scientific papers or reports of County Secretaries, should be typewritten.

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AMERICAN MEDICAL ASSN.—HOUSE OF DELEGATES

Shaler Richardson, M.D., Delegate *Jacksonville*
J. D. Love, M. D., Alternate *Jacksonville*
(Terms expire 1931)

John S. Helms, M.D., Delegate *Tampa*
H. Mason Smith, M.D., Alternate *Tampa*
(Terms expire 1930)

DISTRICTS OF THE FLORIDA MEDICAL ASSOCIATION, INC., AND COUNCILORS

FIRST DISTRICT—W. C. Payne, M.D. *Pensacola*
Okaloosa, Walton, Santa Rosa, Escambia.
SECOND DISTRICT—J. C. Davis, Jr., M.D. *Quincy*
Liberty, Gadsden, Jefferson, Wakulla, Leon, Franklin.
THIRD DISTRICT—Henry M. Strickland, M.D. . . *Live Oak*
Hamilton, Dixie, Taylor, Madison, Columbia, Suwannee, Lafayette.
FOURTH DISTRICT—J. M. Irwin, M.D. . . . *St. Augustine*
Nassau, Clay, Duval, St. Johns.
FIFTH DISTRICT—Geo. A. Dame, M.D. *Inverness*
Citrus, Marion.
SIXTH DISTRICT—O. O. Feaster, M.D. . . . *St. Petersburg*
Pinellas.
SEVENTH DISTRICT—H. W. Henry, M.D. . . . *New Smyrna*
Brevard, Volusia, Seminole.
EIGHTH DISTRICT—J. L. Summerlin, M.D. . . . *Gainesville*
Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.
NINTH DISTRICT—D. M. Adams, M.D. *Panama City*
Holmes, Washington, Bay.
TENTH DISTRICT—G. C. Overstreet, M.D. . . . *Lakeland*
Polk.
ELEVENTH DISTRICT—Robt. C. Woodard, M.D. . . . *Miami*
Dade.
TWELFTH DISTRICT—W. H. Grace, M.D. . . . *Ft. Myers*
Glades, Charlotte, Hendry, Lee, Collier.
THIRTEENTH DISTRICT—W. M. Rowlett, M.D. . . *Tampa*
Hillsboro, Hernando, Pasco.
FOURTEENTH DISTRICT—N. A. Baltzell, M.D. . . *Marianna*
Calhoun, Jackson, Gulf.
FIFTEENTH DISTRICT—C. W. Shackelford, M.D.
Palm Beach, Broward *West Palm Beach*
SIXTEENTH DISTRICT—S. C. Wood, M.D. . . . *Leesburg*
Sumter, Lake.
SEVENTEENTH DISTRICT—C. D. Christ, M.D. . . *Orlando*
Osceola, Orange.
EIGHTEENTH DISTRICT—T. M. McDuffee, M.D. . *Manatee*
Manatee, Sarasota.
NINETEENTH DISTRICT—
DeSoto, Hardee, Highlands.
TWENTIETH DISTRICT—William R. Warren, M.D. . *Key West*
Monroe.
TWENTY-FIRST DISTRICT—H. D. Clark, M.D. . *Ft. Pierce*
St. Lucie, Okeechobee, Indian River, Martin.

WOMAN'S AUXILIARY

Mrs. M. A. Lischkoff, Presioent *Pensacola*
Mrs. J. Ralston Wells, President-elect *Daytona Beach*
Mrs. Arthur L. Walters, Vice-President *Miami Beach*
Mrs. J. M. Irwin, Historian *St. Augustine*
Mrs. Rufus Thames, Secy.-Treas. *Milton*

PENSACOLA MEETING

This issue of the Journal is termed the "Pensacola Number," the scientific papers being from the pens of members of the Escambia County Medical Society. There is also an article descriptive of Pensacola, our next meeting place, which the members of the Florida Medical Association will read with interest. Members of the Escambia County Medical Society are lending every effort to make our meeting a most successful one. The meeting is being held one month later than last year in order that those members residing in tourist centers may have a better opportunity of leaving their practice. The Scientific Program Committee states that the program will be a most excellent one, all phases of medicine and surgery being represented.

APPROVED HOSPITALS

On page 465 of this issue of the Journal appears a list of the approved hospitals of the Florida Medical Association. The Hospital and Medical Education Committee, consisting of Dr. John E. Boyd, Jacksonville, chairman; Dr. John S. Helms, Tampa, and Dr. H. F. Watt, Ocala, has been untiring in its efforts to obtain information concerning the various hospitals throughout Florida and the report submitted will be read with a great deal of interest. The efforts of this Committee are in every way constructive and if carried on in future years, as during the past year, will aid greatly in raising the standards of hospitals throughout the state.

NATIONAL HOSPITAL DAY, MAY 12, 1930

National Hospital Day is now annually celebrated by thousands of hospitals in Canada and the United States, as well as other lands, because it provides the means of directing public attention to the great work which these institutions do in the humanitarian cause. The movement originated eight years ago and was an expression of the widely growing feeling that communities were not only entitled to information about hospital endeavor, but should in their turn afford more definite support to these projects which contribute to the health and happiness of citizens in general. The hospital today functions as a most important and essential utility and is closely related to the program of public health activities.

The observance of National Hospital Day also commemorates the birthday of Florence Nightingale who must not only be recalled, in the figure of romance, as the ministering angel moving with her lamp down the long lanes of pain in the military hospital at Scutari, but even more thankfully because she wrought a revolution in hospitals and made nursing a science. Every modern hospital with its extensive equipment, staff of workers, and evidence of skill applied in the treatment and amelioration of disease is in a sense the gracious product of that revolution.

The particular object of the National Hospital Day movement is to encourage the public to visit a hospital on May the 12th so that all may become acquainted with the methods of conducting these institutions, their curative, custodial, educational and research activities, and by so doing to dispel the old time fear of the hospital and to compel the conviction that it is the proper place to come to when one is ill.

STATE NEWS ITEMS

The following reports have been received from councilors who were unable to be present at the pre-convention meeting held in Jacksonville, March 6th. Reports from councilors in attendance appeared in the March issue of the Journal:

FOURTH DISTRICT—J. M. Irwin, M.D., *St. Augustine*
Nassau, Clay, Duval, St. Johns.

As Councilor of the Fourth District (which comprises the counties of Clay, Duval, Nassau and St. Johns, and in which two societies, Duval and St. Johns, are maintained), I submit the following brief report: Both societies have continued their earnest efforts in the line of professional and progressive activities and policies. Both continue to be practically up to the 100% membership mark. Several of the physicians from Clay and Nassau counties hold membership in the Duval County Society, no separate societies being maintained in these two counties. Both counties have regular monthly meetings and have passed through a year of harmonious endeavor and good work and are in good, healthy condition.

The Councilor wrote several letters, sent a number of telegrams, had a number of telephone conversations and attended the Ocala Conference in connection with the consideration of the proposed Basic Science Law.

SEVENTH DISTRICT—H. W. Henry, M.D.,
New Smyrna
Brevard, Volusia, Seminole.

I herewith submit my report as Councilor for the Seventh District, composed of the counties of Brevard, Volusia and Seminole.

Brevard County is well organized, having a membership of eleven, comprising all the eligible doctors in the county, and has one hundred per cent paid up membership for 1929. Meetings are held every third Tuesday night, rotating between Titusville, Cocoa and Melbourne, with an average attendance of eighty per cent. The society has lost three members by removal and gained two new ones during the past year.

Its officers for 1930 are: W. C. Page, M.D., president, Cocoa; C. B. White, M.D., vice-president, Cocoa; I. K. Hicks, M.D., secretary and treasurer, Melbourne.

The Volusia County Medical Society has a membership of thirty-eight with thirty-seven members fully paid up for 1929. It has lost two members and taken in two new ones during the year. Meetings are held on the second Tuesday of each month in Daytona Beach, DeLand and New Smyrna in rotation and are featured by papers on scientific subjects and their discussion.

Seminole County Medical Society has eleven members, comprising all the eligible doctors within its territory. Its meetings are held regularly on the second Friday of each month in the City Hospital at Sanford with an average attendance of seventy-seven per cent. It has a full one hundred per cent of paid up members. During the past year the Society has lost two members by removal to other locations and gained one new member.

I wish to express my appreciation of the assistance given me by the secretaries of the component societies and feel free to congratulate the societies in my district on their splendid showing as the results are due entirely to their own efforts.

TENTH DISTRICT—G. C. Overstreet, M.D., *Lakeland*
Polk.

"Imperial Polk," the only county in the Tenth District, has an active County Medical Society and has enjoyed a profitable year during 1929, under the able leadership of Dr. George Carefoot, Ft. Meade, as president, and Dr. Herman Watson, Lakeland, as secretary. The monthly meetings have been well attended, interesting and instructive. The membership includes every eligible physician in the county, some, however, not being in good standing at the present time, due to the fact that only about 75% paid their dues to the State Association for the year 1929.

We had the pleasure of entertaining our able state president, Dr. Dozier, at our regular December meeting at which time he gave us a very interesting and inspiring address.

We boast of a Grade A hospital in our district, the Morrell Memorial Hospital in Lakeland, having met the requirements of the American Medical Association and the Hospital Section of the American College of Surgeons, and is so listed. There are also other splendid Hospitals in the District, the Lake Wales General Hospital, having been opened the past month. Our standards of medical practice are being elevated and organized medicine has had a very profitable year during 1929.

ELEVENTH DISTRICT—Robt. C. Woodard, M.D., *Miami*
Dade.

The report of the Eleventh District, comprising as it does only one county, will necessarily be a report of the conditions of the medical profession in Dade County. The past year has been, perhaps, one of the most successful in the history of the Dade County Medical Society. Your councilor is unable to recall any unpleasantness within our ranks. Our local society continues to have a very large and energetic membership. Our society meetings are always well attended and we have had presented at each gathering two or more scientific papers. The outstanding event of the past year was the meeting of the Southern Medical Association with us last November. The number of letters that we have received since that time, from those who were in attendance, cause us to believe that the meeting was quite a success. We deemed it quite a privilege as well as a genuine pleasure to entertain this convention. Dr. Roy J. Holmes was elected first vice-president, an honor which was appreciated very much. At our December meeting, our society elected Dr. P. T. Skaggs as its president, Dr. Skaggs being, in point of residence, one of our oldest members, and of him it can truly be said, one of our most beloved physicians. On the whole, I believe it may be said that the Dade County Medical Society is at this time in a very prosperous condition, nothing having transpired during the past year that would tend to disrupt us in any way. On the contrary, every one seems to be doing his "bit" to place the Dade County Medical Society in the front ranks of medical organizations in Florida.

SEVENTEENTH DISTRICT—C. D. Christ, M.D., *Orlando*
Osceola, Orange.

I wish to submit the report of the activities of this councilor district for the past year.

During the past year there have been twelve regular meetings and one called. There was a total attendance of 389. There were ten papers read, nine by members and one by a guest. Five new members have been admitted, Drs. Ashley Shoemaker, Westcott, White, and Woods. Two honorary members have died, Drs. English and Kime. Drs. Davila and Summitt have moved away but retain their membership here. Four members have been suspended. Roll shows 51 active members and two honorary members.

No written reports have been received from the following districts:

THIRD DISTRICT—Henry M. Strickland, M.D., *Live Oak*
Hamilton, Dixie, Taylor, Madison, Columbia, Suwannee, Lafayette.

FIFTH DISTRICT—Geo. A. Dame, M.D. . . *Inverness*
Citrus, Marion.

EIGHTH DISTRICT—J. L. Summerlin, M.D., *Gainesville*
Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.

TWELFTH DISTRICT—W. H. Grace, M.D., *Ft. Myers*
Glades, Charlotte, Hendry, Lee, Collier.

SIXTEENTH DISTRICT—S. C. Wood, M.D., *Leesburg*
Sumter, Lake.

TWENTIETH DISTRICT—William R. Warren, M.D., *Key West*
Monroe.

TWENTY-FIRST DISTRICT—H. D. Clark, M.D., *Ft. Pierce*
St. Lucie, Okeechobee, Indian River, Martin.

The readers of this Journal will be interested to know that the Surgical Supply Company, of which Henry L. Parramore is president, has moved its Jacksonville store to 36 and 38 West Duval Street. This is next door to the old location but gives twice the floor space. Mr. Parramore has been a regular advertiser in the Journal for years and is always available in connection with the exhibits at all the annual meetings of the association.

* * *

The Pasco-Hernando-Citrus County Medical Society met as the guest of Dr. George A. Dame of Inverness, March 13th. Dinner was served at 7 p. m., followed by a scientific program.

* * *

Dr. J. N. Moore of Ocala left recently for New York City where he will spend some time doing post-graduate work in X-ray and radium.

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NOTICE

Application has been made for convention rates in connection with the Fifty-Seventh Annual Meeting of the Florida Medical Association at Pensacola. Inquire of your ticket agent before purchasing ticket.

* * *

The Pinellas County Medical Society held a meeting Friday, March 21st, at 8 p. m. Dr. C. L. Bonifield, Professor of Gynecology in the University of Cincinnati, and Dr. Clarence A. Neymann, Associate Professor of Psychiatry at Northwestern University, were the guests of honor.

DR. CICERO W. LOVE

Dr. Cicero W. Love was born in North Carolina, July 15, 1876. He graduated from the University of Maryland in 1902. He married Miss Maude Hendry of Blackshear, Georgia, in 1904, and located in Lakeland in 1905, where he was in active practice until the day of his death which was February 5, 1930. Cause of death was coronary thrombus. He leaves two children and his widow.

Dr. Love was an active member of the County, State and American Medical Associations and was President of the Staff of the Morrell Memorial Hospital, as well as local surgeon for the Atlantic Coast Line Railroad. He was also a Shriner.

DR. FREDERICK J. BOWEN

The many friends of Dr. Frederick J. Bowen, one of the state's leading surgeons, will regret to learn of his sudden death, which occurred at 10 p. m., March 22, 1930, at his home, 2000 Park St., Jacksonville. Dr. Bowen had just celebrated his fifty-third birthday and was preparing to leave for Miami when he was stricken.

The following resolutions were spread on the minutes of the Duval County Medical Society at a meeting held recently:

"It is fitting and proper that the Duval County Medical Society make official record of the recent death in this city of Dr. Frederick Bowen. Dr. Bowen was born at Hornell, N. Y., March 22, 1877. After attending Cornell university for two years he transferred to the medical department of the University of Michigan, where he was graduated in 1901. He then did post-graduate work at the Massachusetts General hospital and in London, England, during 1901 and 1902, and after practicing in Massachusetts for a few months, came to Jacksonville in 1903. In beginning his work in Jacksonville, he was interne in old St. Luke's hospital, and had been intimately connected with that institution up to the time of his death, at which time he was acting surgeon on the staff. He was most active in organized medicine, and had served as president of the Duval County Medical Society.

"Giving of his time most freely, there was probably no man in Jacksonville who did more charity

work. His devotion to the practice of surgery was seldom equaled.

"Therefore, be it resolved, That the Duval County Medical Society has lost one of its most valued members, and the medical profession not only in Jacksonville, but throughout the state of Florida, has been deprived of the services of a distinguished physician in the death of Dr. Bowen, and be it further resolved, That the members of our society record our sense of personal loss in the passing of our brother practitioner."

LIST OF APPROVED HOSPITALS OF THE FLORIDA MEDICAL ASSOCIATION, INC.

Upon the recommendation of the Hospital and Medical Education Committee it was voted by the House of Delegates in 1929 to adopt a set of "*minimum requirements*" for the standardization of all hospitals in the State. Compliance with the requirements enables the hospital to appear on the "Approved List" of the Association. This list will be published annually in the Journal of the Association, and will also appear in the annual Report of the Florida Hospital Association.

Any hospital that is approved by the American College of Surgeons will be automacially included in this "Approved List." The real reason for the adoption of this program was to be of help to and improve the standard of all hospitals in the State with less than 25 beds, which do not receive help from other sources.

As is the custom with all pioneer work the response to this educational program has been slow. However, the committee feels encouraged. As far as could be learned there are at present in our State forty hospitals of less than 25 beds. Only four of these replied to the letter sent out by the committee, and none of those four were complying with the "*minimum requirements.*" The members of the committee believe, however, that their delinquencies can be easily corrected.

We wish to again emphasize the fact that this committee makes no attempt to be critical. On the contrary we try to render every help possible in an effort to carry out the idea fostered by this Association, which idea is definitely intended as a service looking to the improvement of hospitals throughout the State.

JOHN E. BOYD,
Chairman;
JOHN S. HELMS,
HARRY F. WATT,
Committee.

APPROVED HOSPITALS OF THE FLORIDA MEDICAL ASSOCIATION, APRIL 1, 1930.

	Hospital	City	Superintendent	Bed Capacity	Rating
1.	Morton F. Plant Endowed	Clearwater	Hilda E. Hayes	35	Conditioned
2.	Halifax District	Daytona Beach	Julia Luck	125	Fully Approved
3.	DeLand Memorial	DeLand	Miss Hahn	32	Conditioned
4.	Lauderdale General	Ft. Lauderdale	Mrs. A. Lawin	28	Conditioned
5.	Alachua County	Gainesville	Annie Hessler	55	Fully Approved
6.	Duval County	Jacksonville	Fred M. Walker	180	Fully Approved
7.	Riverside	Jacksonville	Beatrice Leland	40	Fully Approved
8.	St. Luke's	Jacksonville	J. H. Holcombe	175	Fully Approved
9.	St. Vincent's	Jacksonville	Sr. Marguerite	210	Fully Approved
10.	U. S. Marine	Key West	M. S. Lombard, M.D.	40	Fully Approved
11.	U. S. Veterans'	Lake City	H. C. VonDahm	252	Fully Approved
12.	Morrell Memorial	Lakeland	Walter Weed, M.D.	95	Fully Approved
13.	Melbourne	Melbourne	I. M. Hay, M.D.	27	Conditioned
14.	Dade County	Miami	J. A. Smith, M.D.	102	Conditioned
15.	Jackson Memorial	Miami	A. J. McRae, M.D.	325	Fully Approved
16.	Victoria	Miami	Mary E. Parish	68	Fully Approved
17.	St. Francis	Miami Beach	Sr. M. Alice	100	Fully Approved
18.	Munroe Memorial	Ocala	John A. Bowman	65	Fully Approved
19.	Florida Sanatorium and Benevolent Association	Orlando	L. L. Andrews, M.D.	102	Fully Approved
20.	Orange General	Orlando	Henry Yates	150	Conditioned
21.	Pensacola	Pensacola	Sr. Alexine	115	Fully Approved
22.	U. S. Naval	Pensacola	Capt. Jno F. Murphy	190	Fully Approved
23.	East Coast	St. Augustine	W. E. Burnett, M.D.	100	Fully Approved
24.	Flagler	St. Augustine	C. O. Stimmel	85	Fully Approved
25.	City Hospitals (Mound Park-Mercy)	St. Petersburg	C. S. Myers	89	Fully Approved
26.	Faith	St. Petersburg	W. C. McConnell, M.D.	50	Fully Approved
27.	Sarasota City	Sarasota	Miss Nina F. Self	65	Conditioned
28.	Florida Agricultural and Mechanical College	Tallahassee	L. H. B. Foote, M.D.	25	Conditioned
29.	Children's	Tampa	Olive Rogan	30	Fully Approved
30.	Tampa Municipal	Tampa	Sheldon Stringer, M.D.	225	Fully Approved
31.	Good Samaritan	West Palm Beach	W. L. Shackelford, M.D.	125	Fully Approved

DR. JAMES D. LOVE

Dr. James Davis Love, 57, of 2063 Oak street, prominent physician and pioneer resident of Jacksonville since 1898 when he began the practice of medicine, died at 10:30 o'clock Wednesday night, March 26th, following a three-day attack of pneumonia.

In the passing of Doctor Love, the Florida Medical Association has lost one of its most eminent and learned men. His lovable disposition, kindly acts and associations with various medical organizations have gained for him hundreds of close personal friends who will deeply regret his untimely death.

The following resolutions were spread on the minutes of the Duval County Medical Society at its last meeting:

"In the death, March 26, of Dr. James D. Love the Duval County Medical Society lost one of its most valued members. When Dr. Love joined the organization, thirty-two years ago, it had a membership of some twenty-five. During the years the enrollment has grown to 156. To no other man so much as to Dr. Love is the credit of this development into a strong co-ordinating body due, for his was the sure judgment that influenced it to wise decisions when tedious questions of conduct and policy arose.

"Dr. Love held the highest office the state and local society can give, that of president; but he was no more ardent in his devotion to their duties than he was in supporting his confreres in the work of making these societies successful.

"Born in Quincy, Gadsden County, Florida, August 17, 1873, Dr. Love received his preliminary education in the public schools of that county. Later he attended the West Florida seminary at Tallahassee, graduating with the degree of A. B. He was graduated from the medical school of the University of Maryland in 1897, serving an internship in the University of Maryland hospital. Dr. Love located in Jacksonville in 1898, and in 1908 attended courses in pediatrics in Vienna, Paris, London and Boston in preparation for this specialty which he practiced until his death.

"There is a very personal side to his life with the profession of Duval County, in his relations to the young doctor. His keen appreciation of the problems facing a doctor beginning the practice of medicine enabled him to state conditions frankly. His kindness prompted him to give untiring encouragement and aid to him who needed it. To all of us, Dr. Love was a true friend.

"We appreciate the fact that organized medicine in Florida and throughout the South was bettered through his work as a member of many committees, as delegate to state and national conventions, teacher in the North Carolina Pediatric Seminar, and chairman of the Section of Pediatrics of the Southern Medical Association; also that the standards of hospitals in Duval County were raised because of his noble influence and continued efforts. His continued and untiring interest in the Children's Home Society since its founding have endeared him to the many children who have gone out from this institution. Nevertheless, it is his life as a fellow physician that we cherish most.

"In order that the doctors of Duval County may know forever the high esteem in which we held him, this brief notice is placed in the permanent files of the Duval County Medical Society as a modest tribute to our teacher, counselor and friend."

Dr. Ernest Milam, president of the Jacksonville Kiwanis Club has suggested in a letter recently, to all Kiwanis Clubs of the state that the Kiwanis physicians be urged to attend the Fifty-seventh Annual Meeting of the Florida Medical Association.

* * *

The United States Civil Service Commission at Washington, D. C., will accept applications for Medical Officer, Associate Medical Officer, and Assistant Medical Officer until June 30, 1930. Entrance salaries for these positions in the Departmental Service, Washington, are: Associate Medical Officer, $3,200; Assistant Medical Officer, $2,600 a year. A probationary period of six months is required. Entrance salaries in the Veterans' Bureau are: Medical Officer, $3,800 a year, Associate Medical Officer, $3,200 a year. Complete information concerning the appointments are outlined in Bulletin No. 51. Apply to the United States Civil Service Commission, Washington, D. C., for blanks or information.

* * *

If the sale of exhibit space is an indication of the attendance of members of this Association at Pensacola, it will be GOOD. Nine exhibit spaces were sold before the first of April. This represents an income of 50% of total sales last year.

COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	86%
Bay	Don S. Fraser, M.D., Panama City.					36%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		82%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	74%
Columbia	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		70%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	70%
DeSoto-Hardee-Highlands	H. Y. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	64%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	62%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	69%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	73%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	56%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	83%
Leon-Gadsden-Liberty-Wakulla-Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	66%
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	93%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	80%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	67%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	55%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	92%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	68%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	86%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	50%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	71%
St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	92%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					57%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	76%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-Holmes	H. A. McClure, M.D., Chipley.					63%

NOTE—Secretaries: Please submit information to complete the above schedule.

Members of the Sumter County Medical Society met with the Lake County Medical Society on March 6th, at the Magnolia Hotel, Leesburg.

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Dr. E. G. Peek of Ocala has been elected on the State Democratic Committee and as a member of Governor Carlton's Tax Adjustment Board.

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THE SEMINOLE COUNTY MEDICAL SOCIETY WAS THE FIRST SOCIETY TO REPORT 100% OF 1930 MEMBERSHIP DUES COLLECTED. DR. W. T. LANGLEY, SANFORD, IS PRESIDENT OF THIS SOCIETY AND DR. J. T. DENTON, SANFORD, IS SECRETARY-TREASURER.

* * *

The United States Civil Service Commission announces the following open competitive examinations: Senior Medical Technician, $2,000 a year; Medical Technician, $1,620 a year—(a) bacteriology; (b) roentgenology. Applications for senior medical technician and medical technician must be on file with the Civil Service Commission at Washington, D. C., not later than May 7, 1930.

* * *

Drs. R. D. Ferguson and H. F. Watt of Ocala recently returned from New Orleans where they visited clinics and attended the Mardi Gras.

* * *

THE WALTON-OKALOOSA COUNTY MEDICAL SOCIETY WAS THE SECOND SOCIETY TO REPORT 100% OF 1930 DUES COLLECTED. THIS SOCIETY HAS INCREASED ITS MEMBERSHIP FROM SEVEN TO NINE. DR. E. P. WEBB OF CRESTVIEW IS SERVING AS PRESIDENT, DR. R. B. SPIRES OF DARLINGTON AS VICE-PRESIDENT, AND DR. A. G. WILLIAMS OF LAKEWOOD AS SECRETARY-TREASURER.

* * *

A meeting of the Pinellas County Medical Society was held March 7th at 8 p. m. The following scientific program was rendered:

"Urinary Frequency and Some of Its Causes," Dr. G. Timberlake, St. Petersburg.

"Some Interesting Case Reports," Dr. S. A. Folsom, Orlando.

* * *

Dr. and Mrs. L. T. Furlow of Brooksville announce the birth of a son on February 1st at the Municipal Hospital in Tampa.

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Regional Conference of the American Social Hygiene Association, under the auspices of the Louisiana State Board of Health and the New Orleans Council of Social Agencies will be held at the Hotel Roosevelt, New Orleans, May 26-27. Institutes will be held on Friday and Saturday, May 23-24. Public meetings Sunday. Speakers from most of the southern and southwestern states will take part in the program, as well as several representatives from the national society. The meeting should prove of great interest to physicians, public health workers, social service workers and members of parent-teachers' organizations.

* * *

A very interesting meeting of the Suwannee River Medical Society was held at Lake City March 14th. On this occasion, the U. S. Veterans' Hospital, No. 63, acted as hosts to the Society. An excellent dinner was served in the mess hall, at the close of which an address of welcome was given by Dr. H. C. Von Dahm, Medical Officer in charge.

Following dinner, several patients were shown by Dr. John D. Gable in the ward illustrating stramonium treatment of residuals of encephalitis. Following this the meeting assembled in the recreation hall of the hospital where the following excellent program was given by the resident staff of the hospital, Dr. Herbert Caldwell acting as chairman:

"Carcinoma of Stomach," Dr. James H. Dyer.

"Pyelograms," Dr. T. V. Willis.

"Pneumothorax Hydropneumothorax," Dr. P. R. Copeland.

"Report of Primary Carcinoma of Lungs, Infiltrating Type," Dr. Thomas S. Carrington.

"Report of Case Cardiac Enlargement with Edema and Old Pneumonia," Dr. C. W. Hoffman.

"Differentiation Between Hookworm Infection of Lungs and Tuberculosis," Dr. L. J. Arnold.

"Discussion of Iritis with Cases," Dr. W. W. Hendricks.

"Exposition of Electrocardiographs," Dr. Herbert Caldwell.

Because of the length of the program, each paper was limited to fifteen minutes, including discussion. Many of the papers were illustrated by Dr. Carrington with X-ray films.

Drs. T. Z. Cason, Edward Jelks and W. McL. Shaw from Jacksonville were visitors at the meeting.



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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Current medical literature reflects a widespread interest in childhood tuberculosis. Practitioners are realizing the importance of recognizing the disease in its early stages while it is yet possible to curb its insidious extension. "Tuberculosis in Children" by J. A. Myers, which has just issued from the press, limns a clear and homogeneous picture of this complex subject. It describes both the childhood type and the adult type of pulmonary tuberculosis as well as nonpulmonary tuberculosis in children. Long experience as chief of staff of Lymanhurst, in Minneapolis, America's first school of its kind for tuberculous children, gives perspective to Dr. Myers' observations and probably accounts also for those rare sparks of human sympathy which pervade the book, from which the following briefs have been abstracted.

That pulmonary tuberculosis as commonly seen in the adult is preceded by a developmental stage, vaguely designated as the "pre-tuberculous stage," which is more or less concealed or latent, has long been appreciated. Confusion has arisen out of such synonymous terms as infantile, juvenile, tracheobronchial, hilum, primary complex, Gohn's tubercle, employed by various writers to designate this stage. This confusion is largely dissipated by the definition adopted by the American Sanatorium Association in 1929, and to which the author subscribes; namely, "Childhood type of tuberculosis is the term used to describe the diffuse and focal lesions in the lung and adjacent tracheobronchial nodes that result from a first infection of the pulmonary tissue with the tubercle bacillus." Roughly, the distinguishing feature between the childhood type and the adult type of pulmonary tuberculosis is that the former represents the reactions of the bacillus on virgin or non-sensitized soil and is characterized by cell proliferation, while the latter is in the nature of a reinfection on sensitized soil and tends toward destruction of tissue.

WIDE VARIETY OF LESIONS

How the body will withstand the initial infection is determined largely by the dosage of the

(*Continued on page* 474)

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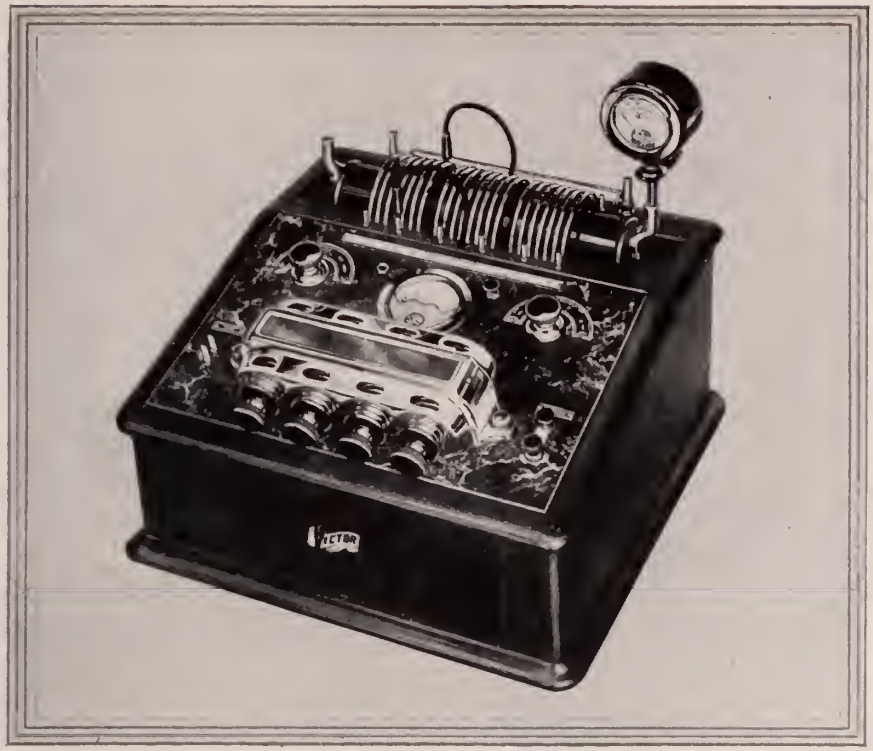
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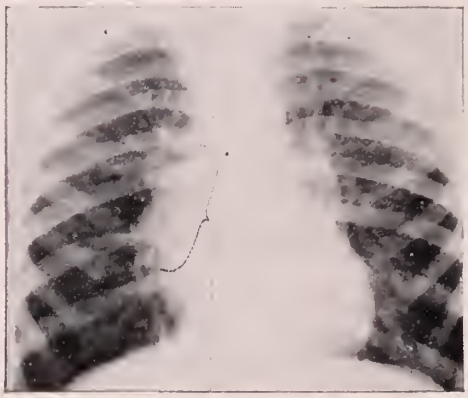
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bacillus and, to some extent, by anatomical differences dependent upon the age of the individual. The resulting pathology may vary widely from a rapidly progressive, disseminated, miliary involvement to a single, small, inconspicuous nodule. A rather typical or common form seen in children of the school age is that in which the initial lesion may appear anywhere in the lung but most commonly at the periphery, followed quickly by an involvement of the lymph nodes draining the infected area. Coincident with this first encounter of the body cells with the tubercle bacillus, the entire body becomes sensitized or allergic. The



Tuberculous lesions of the childhood type. The mother of this child died a few months after the picture was taken.

primary lesion may be so small as to escape detection by the X-ray. The lymph nodes which have become enlarged, later caseous, and then calcified, cast definite shadows on the X-ray film.

SYMPTOMS AND PHYSICAL SIGNS

The diagnosis of childhood type of tuberculosis is not complete until the extent of the involvement and its progress have been determined. A history of exposure to tuberculosis from father or mother or from a close associate is of great significance. There are no characteristic symptoms; the child may or may not be underweight, he may show signs of fatigue and occasionally exhibit a rise of temperature of a degree or two. But even these vague symptoms may be absent. Similarly, physical signs are either absent or untrustworthy, inasmuch as the pathology in early cases is not sufficient to give rise to characteristic physical signs.

(*Continued on page 476*)



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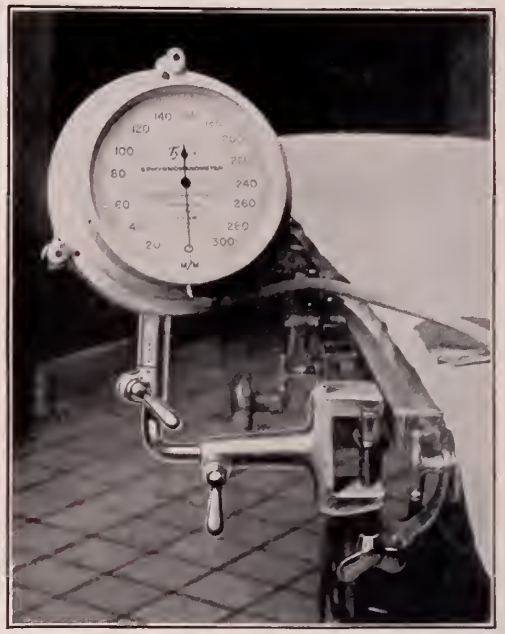
Two procedures, however, enable the practitioner to make a diagnosis: the tuberculin test and the X-ray. The tuberculin test determines infection. Myers recommends the intracutaneous technique, not only because it is more certain but also because the variations in the reaction give some clue as to the extent and activity of a tuberculous process. This test should never be omitted, even in older children. The X-ray pictures the lesions, particularly those that are calcified. No examination for suspected tuberculosis among infants and children is complete without this aid, though a negative X-ray does not necessarily rule out tuberculosis; miliary disease may progress to a fatal outcome while yet the X-ray picture is clear; and focal lesions in the parenchyma and the hilum may be so small as to cast no shadow.

CLOSE CONTACT THE IMPORTANT FACTOR

The author discusses at length the etiological factors, with special reference to the communicability of the disease. The idea that tuberculosis is inherited is, of course, no longer tenable, but the observation of the older writers that "tuberculosis runs in families" is confirmed and explained on the basis of early infection through close contact with adult members of the family. Drawing on his rich experience, Dr. Myers cites numerous cases to illustrate the need of ferreting out the source of infection; for example:

"A student nurse was diagnosed tuberculous in September, 1927, and placed in an institution under treatment. This fall, she is resuming her training. An older sister was examined, and although she did not have the adult form of tuberculosis at that time, there was unmistakable evidence of the latent childhood type in her chest. What was the source of exposure? The older sister was inclined to believe that she might have developed the disease through intimate contact with her sister. However, this did not seem probable since her disease appeared far older than that of her sister. According to the history, there had never been a case of tuberculosis in their family. In August, 1929, we were asked to see the mother, who had been brought to a hospital. She had frank pulmonary tuberculosis with bacilli in the sputum."

(*Continued on page* 478)



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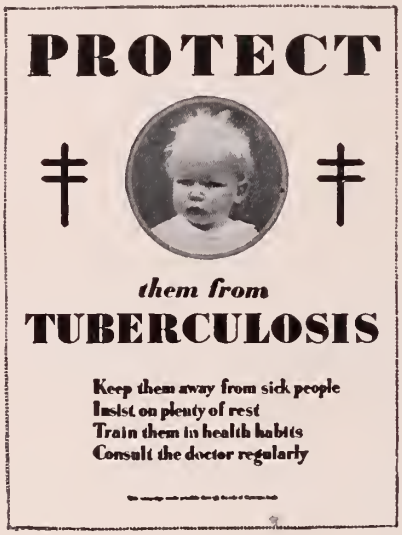
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During April, 1930, tuberculosis associations throughout the country will call to the attention of the public the importance of discovering tuberculosis in its latent stage in children. More than five million pamphlets will be distributed; two hundred thousand posters like that illustrated and six thousand billboard posters will be displayed. Newspaper articles, lectures, motion pictures, and many other publicity devices will also be called into play. For physicians who desire it, there will be made available a 32-page brochure on "The Childhood Type of Tuberculosis" by Chadwick and McPhedran. It treats of the diagnosis, prognosis and treatment of the condition, describes the technique of the tuberculin test and interprets the reactions by means of color plates. There are six excellent X-ray pictures reproduced by the "acquatone" process, with interpretations. Ask your tuberculosis association or the National Tuberculosis Association for a copy.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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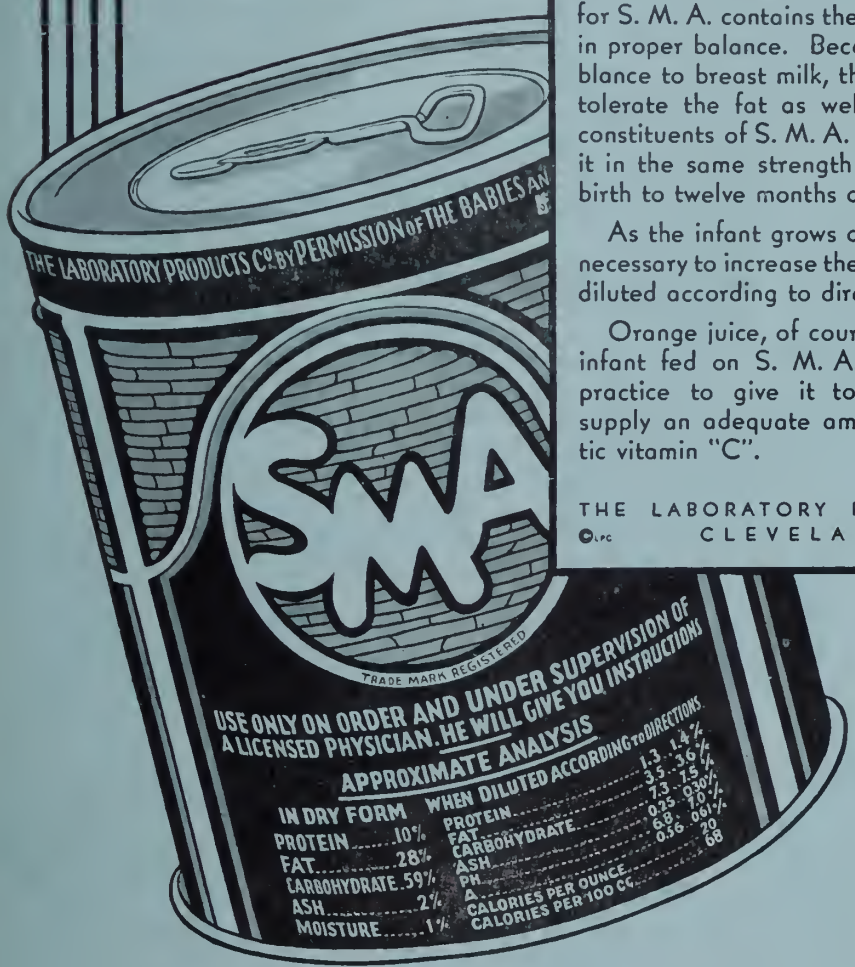
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NO. 11

Jacksonville, Florida, May, 1930

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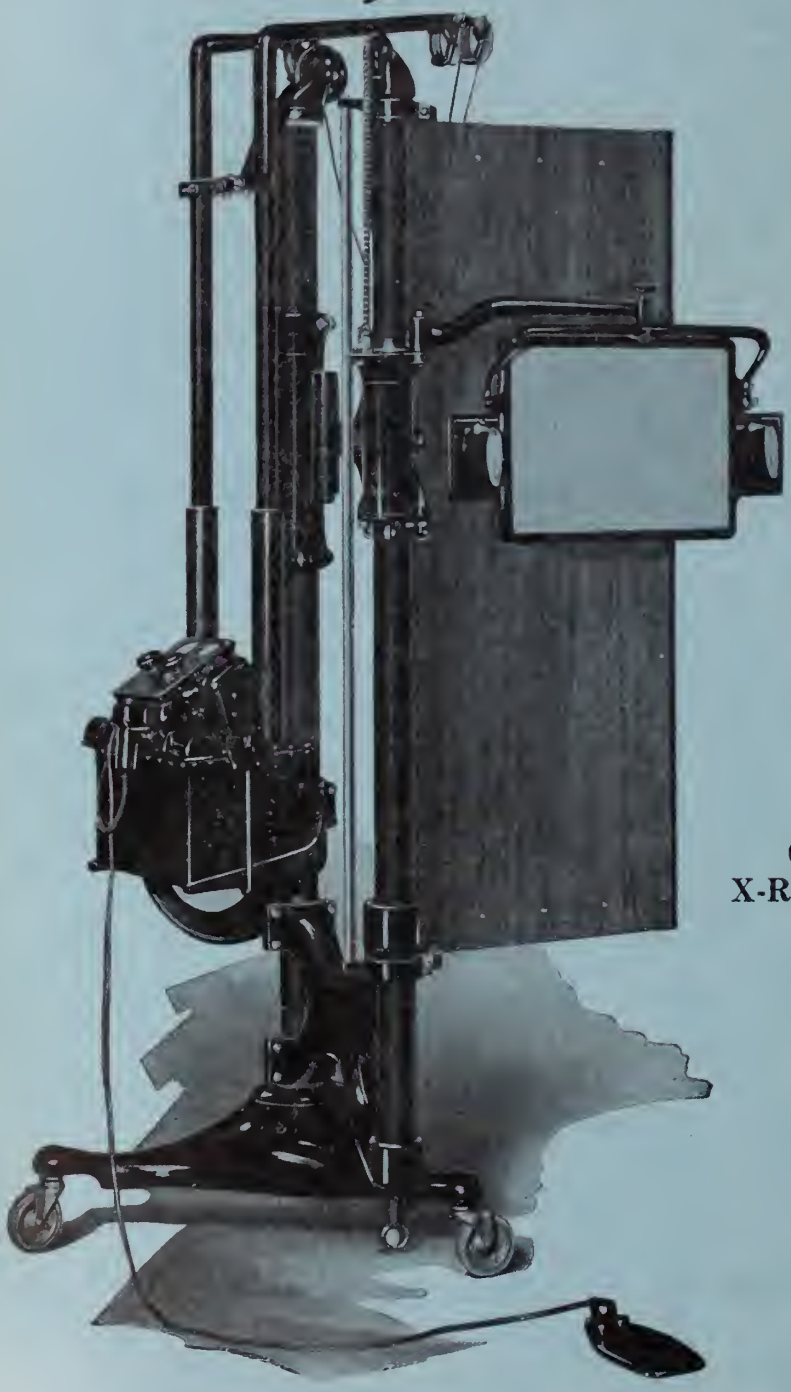
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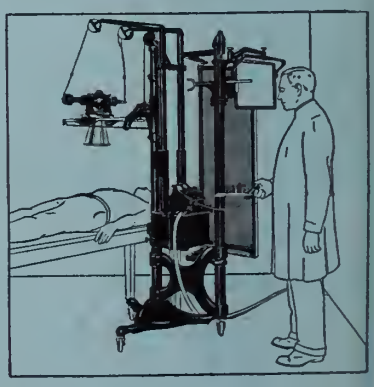
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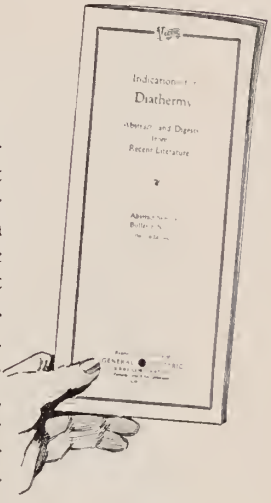


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Think of these facts as you plan your meals. And in addition to using sugar as a flavor remember that simple wholesome desserts have their place in balanced meals. The normal diet calls for sugar. Ask your doctor! The Sugar Institute.

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THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION
PUBLISHED MONTHLY

Volume XVI | Jacksonville, Florida, May, 1930 | Number 11

President's Address*

MEDICAL EDUCATION OF THE LAITY

H. C. Dozier, M.D., F.A.C.S.,
Ocala.

Members of the Florida Medical Association, and Guests:

For the last year I have had the honor to serve the Florida Medical Association as its president, and I wish to express my deep appreciation of this distinction, and to assure you that any shortcomings or failures of mine have not been of the will or the heart.

During this time, I have thought of many things which might be for the benefit and good of our association, but none more important to the survival of the ethical physician, or more necessary to a proper understanding and appreciation of our noble profession, than the education of the layman in medical history, in the accomplishments of the medical profession, and in those facts of medical science, which would contribute most to the health and happiness of our fellow citizens and of future generations.

For many centuries, happiness has been regarded as the summum-bonum or greatest good, that could come to man, and human happiness cannot reach its fullness in the presence of ill health, or in the dissemination of false science, and faddism by unscrupulous "quacks", who prey on the medical credulity of the laity. I believe that to the lack of medical education of the laity is largely due the success of the various medical cults.

Many may say that we are living in an age and in a country of minimum illiteracy, and this is true, I believe, so far as general education goes, but to only a very limited extent in medical science, except within the medical profession itself. While the advances of all sciences in the last few hundred years have removed from modern civilization many of its superstitions and false beliefs, still the mass consciousness believes in astrology, in spite of the advances in the science of astronomy.

When it comes to professional and medical matters, the layman is ignorant, though otherwise he may be highly educated. The average layman believes that Lister evolved Listerine, and that senna leaves were named for Nicholas Senn. He is first ignorant of the fact (1) that one kind of doctor is any different from another, except, perhaps, in the form or type or so-called "school" of his treatment; (2) ignorant of the fact that a regular, scientific physician is wedded to no definite or particular form of treatment, but is concerned only, in his research and practice, with that treatment, whatever it may be, which will make his patient well; (3) ignorant of the preparation, and educational labor and character training that it takes to make a real "doctor;" (4) ignorant of the *value* and necessity of an educated, intelligent medical profession, or of medical science, to the economic and social development of a city or state or nation. A Gorgas had to precede the engineers, before the Panama Canal was possible. (5) He is ignorant of the wonderful discoveries of Pasteur, which had a more far-reaching, and infinitely more beneficial influence on humanity than all the victories of the world's military forces; (6) ignorant of the wonderful work in preventive medicine, which has been accomplished by medical science, and which has contributed so much to the development of industry and orderly every-day business, that its far-reaching results are enjoyed by everyone, but not often appreciated nor understood; (7) ignorant of the source of the wonderful blessings and benefits resulting from the advances of researches in hygiene and sanitation, and in the use of vaccines and serums.

"Ten years ago the British Empire alone lost 3,000,000 malaria-ridden lives a year; and the toll in tropical America, Africa and Asia was immensely greater. But in the past ten years the tropical doctor has cut the deaths in the British Empire from 3,000,000 to 300,000, a reduction

*Delivered before the Fifty-seventh Annual Meeting of the Florida Medical Association, held at Pensacola, May 6, 7, 1930.

of 1000%." This was not accomplished by a quack or any cult, but even the educated layman does not know, or at least does not appreciate, that fact.

"Between 1881 and 1889, during DeLesseps' attempt to build the Panama Canal, 16,000 white employees died of tropical diseases; and 9,000 of these succumbed to yellow fever. But only two federal employees, one white and one negro man, have died in the Canal Zone from any tropical disease during the past eight years." No quack or cult accomplished that, but does the layman give full credit to the altruistic, self-sacrificing profession which means so much to the happiness and material benefit of mankind?

"The science of tropical medicine," says Dr. Torrance, in World Work for April, "in the past 30 years has won mastery over yellow fever, plague, malaria, black-water fever, relapsing fevers, African sleeping sickness, the dysenteries, typhus, syphilis, yaws, beriberi, pellagra, hookworm, and leprosy. It saves millions of people every year; more, it has become a factor of practically limitless power in the world's economy. It opens up vast territories hitherto closed to the white man and his enterprises, and makes for better living conditions among natives, who have known only squalor. It increases the food supply of the earth a thousand fold. It provides safe and beautiful environments where men and women may rest and recuperate from routine cares of home and business."

The science of tropical medicine was not born, nurtured and developed by any quack or cult, but is that fact known and appreciated by the average layman?

It has been said that there are two kinds of fools in the world, one who hides his candle or talents under a bushel, and one who shouts his virtues and accomplishments from the house top, but the greatest fool is the one who hides his talents under the bushel, because no one will ever know of him, but some, at least, will believe the loud shouts of the other fool.

I believe the medical profession has all too long been acting the part of the first fool; they have been too densely hedged around with tradition, and have hidden their accomplishments under the "bushel" of medical caution, conservatism, professional modesty and dignity.

If the ethical physician is to survive, if the tide of state medicine is to be stemmed, if the number of the fast multiplying faddists, quacks and cults is to be stopped, it must come through intensive, well-directed, systematic education of the laity by the medical profession, over a period of at least five years, and not only through a biennial appeal for medical legislation, which is often defeated by that very lack of knowledge of medical accomplishments and lack of appreciation of our high professional motives, about which I have been attempting to speak to you. Education should precede legislation.

I am glad to say the medical profession, as a whole, is gradually awakening to the importance of this subject.

The Illinois Medical Association, through its Educational Committee, furnished speakers to the Illinois Federation of Woman's Clubs, Young Mother's Clubs, Men's Groups, Auxiliaries to County Medical Societies, Y. M. C. A.'s, Business and Professional Women's Clubs, University Clubs, Parent-Teacher's Associations, and various community meetings during the last four months of 1929; in all for 143 meetings at which there were over 40,000 people in attendance. This same committee furnished speakers for 34 radio talks on health educational matters, over WGN and WJJD; 2,652 news articles were released to newspapers in the same four months, which includes the "health educational column," which is now supplied to about 100 newspapers in Illinois.

The A. M. A., in its bulletin for March, 1930, states that "the American Medical Association, and a growing number of its component societies, are using the radio to tell the public about the facts that scientific medicine has developed in the study of health and disease; but quacks and fakers are also using the same means for carrying unscientific statements to the same public. . . . That a large part of the public is interested in having authentic information, based on scientific facts, is clearly shown by the tremendous response that comes to the American Medical Association in the shape of letters from listeners to its broadcasting programs. More than 500 letters recently came in one day's mail as one of the results of a radio talk delivered on the preceding day. That a very considerable part of the public is disposed to put its trust in false gods is clearly shown by the evidences of prosperity that surrounds the quacks who use the radio to further their nefarious schemes."

The latter statement we know is true because many of us have heard over the radio the sepulchural voice of Dr. P. L. Clark, head of the

Chicago School of Sanatology, and that of Alfred McCann of New York, or Frank McCoy of the Los Angeles Times, all preaching their strange notions regarding diet.

Many, if not all of you, are familiar with the syndicated articles of Dr. Fishbein, and those from the N. Y. Academy of Medicine.

I do not wish anything I have said, or will say, to be construed as minimizing the importance of the work of our Legislative Committee. I know of no Committee of this Association which now has, and will have, for many years in the future, more hard, grinding, conscientious work to perform than the Legislative Committee.

With poor England suffering under the panel system of doctors and state medicine; with Russia proposing the abolition of private medical practice, and teaching children the needs and uses of abortion, rather than healthful exercise; with the Jones-Cooper bill (a revival of the Sheppard-Towner bill), and with the nefarious Porter bill, before the Ways and Means Committee of the House of Representatives, and the Committee on Foreign Affairs of the Senate; with the multiplying varieties of cults and quacks, seeking legalizing boards from Legislatures; and with the multiplying agencies of public health and welfare, all of which are gradually eliminating the private practice of medicine and encroaching on the personal rights of the physician, there is urgent need of an elert, intelligent, informed and enthusiastic Legislative Committee in our Association.

I wish to offer for your consideration the suggestion that this Association create a special "Educational Committee", whose duties shall be specified, and whose activities shall be directed to medical education of the layman and the doctor himself, if necessary; through a "*Speakers Bureau*", for talks to various organizations, associations, clubs, etc.; a "Radio" section, for work implied by its name; a "Scientific Service Section" which shall prepare scientifically correct articles for publication through a "Press Service", or to be delivered over the radio, or read before organizations; and whose duty it shall also be to provide or secure films for use of lay groups or physicians. I would also suggest that this Association approve the same general plan for its component medical societies.

I would like to see each medical society in this state either prepare or procure, 52 articles each year, in advance, for publication in the local newspaper once each week, over the signature of the medical society, and not that of any member or officer. I assure you the ground is fallow, if we will only sow the seeds of education.

I hope I have excited your interest in this matter, which I regard as vital to the continued existence of the ethical, scientific physician; and I feel that I am simply giving you a call to "duty"—a duty to yourselves, as individual doctors; a duty to the noble and honorable profession, which is your calling; and a duty to your fellow citizens and to your country.

I thank you for your cooperation during the past year, and again thank you for the distinguished honor that you conferred upon me last April in St. Augustine.

PROCEEDINGS

of the

FIFTY-SEVENTH ANNUAL MEETING

of the

FLORIDA MEDICAL ASSOCIATION, Inc.

HELD AT PENSACOLA, FLORIDA

MAY 6th and 7th, 1930

The Fifty-seventh Annual Meeting of the Florida Medical Association was called to order at 10 a. m. in the auditorium of the San Carlos Hotel at Pensacola by Dr. W. C. Payne, chairman of the Committee on Local Arrangements. The invocation was rendered by the Reverend J. E. Northcutt, D.D., pastor, First Methodist Church, Pensacola. The address of welcome on behalf of the Escambia County Medical Society was made by Dr. Carol C. Webb, President. The

Honorable J. Harvey Bayliss, Mayor of Pensacola, then welcomed the members of the Association on behalf of the City of Pensacola. The welcome was responded to on behalf of the Association by Dr. Herrman H. Harris of Jacksonville. Dr. Henry C. Dozier of Ocala then delivered the annual presidential address, the subject of which was, "Medical Education of the Laity." Dr. Charles W. Duval of New Orleans, Louisiana, having been invited as the guest of honor, delivered an address on "The Correlation of the Urinary Findings and the Renal Pathology in Experimental Streptococcal Nephritis" (with lantern slide demonstrations). This concluded the first General Session of the meeting.

SECOND GENERAL SESSION

The Second General Session convened in the auditorium of the San Carlos Hotel at 12:15 p.m. May 6th, and was called to order by the president, Dr. Henry C. Dozier of Ocala. The following report was read by Dr. Shaler Richardson, Secretary-Treasurer-Editor:

REPORT OF SECRETARY-TREASURER-EDITOR OF THE JOURNAL, DR. SHALER RICHARDSON, AND BUSINESS MANAGER DR. STEWART G. THOMPSON

To the President and Members of the Florida Medical Association in Session at Pensacola, Florida:

GENTLEMEN:

MEMBERSHIP

The various component societies have reported a total of 1,102 members for the calendar year 1929. The total number of paid members is 1,020, which we believe is a very encouraging and creditable showing.

The advantage of well-kept records as are maintained in the office of the Florida Medical Association is becoming obvious to the public, as is indicated by the great number of requests for information as to the standing of physicians in their respective communities. The fact that a physician is a member of the Association is accepted by laymen as being an evidence of the doctor's standing in his community. The February issue of the Journal contains the official roster of the members of this Association and is being used extensively by both medical and lay organizations throughout the state.

COUNTY SOCIETIES

As stated in previous reports, the strength and high standing of the state Association lies in the effectiveness and enthusiasm of the different component societies. The readers of the Journal could not help but note the unusual interest taken in the programs during the past year. Guests have been invited from one county society to another; joint meetings have been arranged with near-by and adjacent societies and, in fact, a noticeable increase in the interest and enthusiasm of the regular meetings has been observed during the year.

The Second District, comprising the five counties of Leon, Gadsden, Liberty, Wakulla and Jefferson has set a precedent of joint quarterly meetings and, in addition to the combining of all the counties in the district, many physicians from the bordering state on the north have been regularly invited and have, in unusually large numbers, attended. Other combinations have followed, including Sarasota and Manatee Societies, which meet together frequently in a mutually beneficial and pleasant combination; Escambia County Medical Society entertains, periodically, doctors from outside its own immediate membership. There are possibly other societies, not known to the authors of this report, which profit by joint meetings. Sumter and Lake County Medical Societies made a recent effort to combine into a joint component society which many members felt would be better than the single county societies. Bradford County Medical Society, because its membership was small and scattered, disbanded during the year, and the doctors who were affiliated with that organization have joined near-by societies. The tendency seems to be toward fewer but larger and stronger societies.

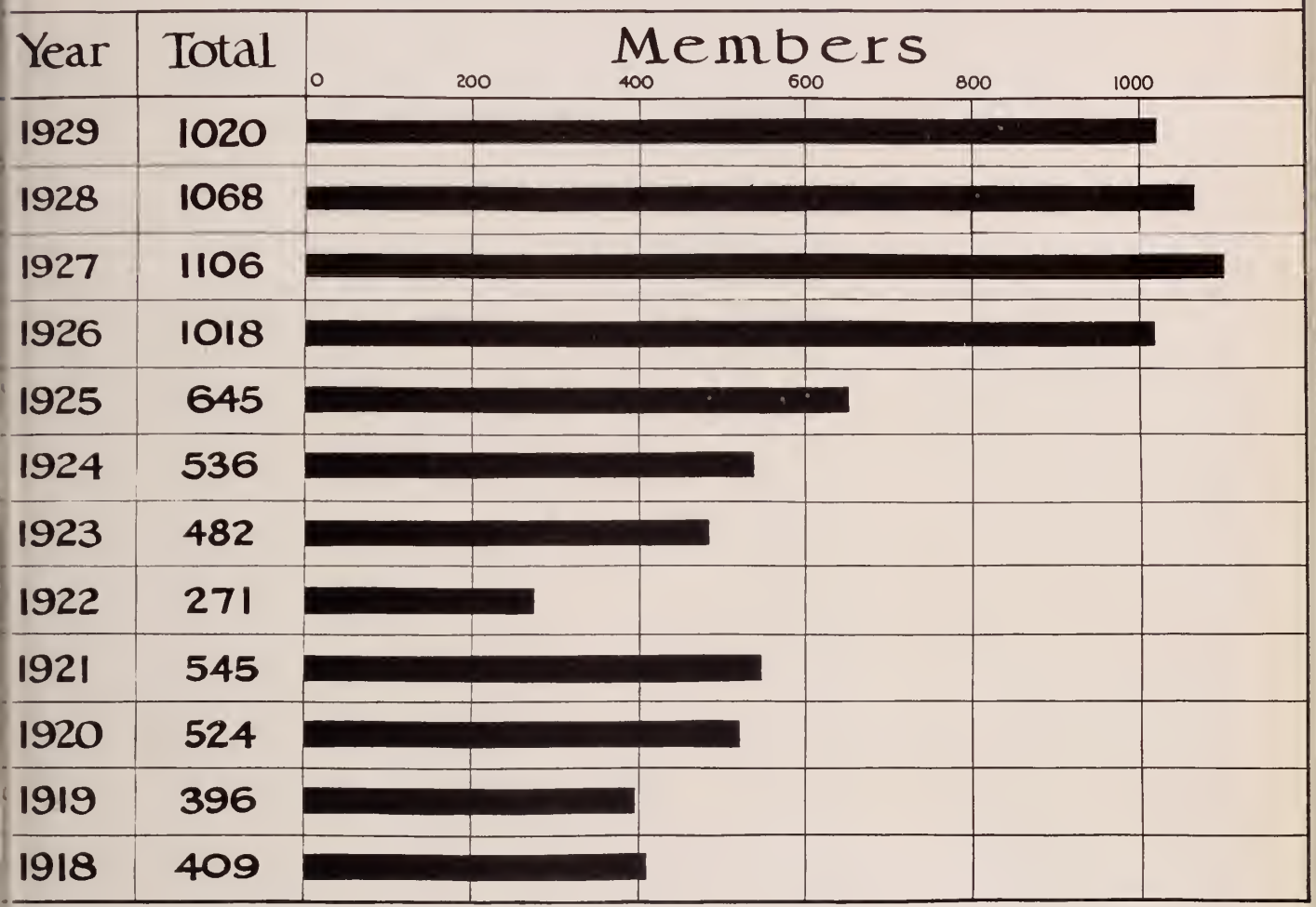
FINANCES

Following the usual procedure since the establishment of the business office, your Executive Committee approved the proposed budget which was submitted to carry on the work of the Association during the past year. The total expenditures were kept well within the provisions made by this budget. Aside from the expenditures of the Committee on Legislation and Public Policy, no unusual indebtedness has been incurred and the finances of our Association have been carefully conserved.

The special allowance provided for the Committee on Legislation and Public Policy was

FLORIDA MEDICAL ASSOCIATION, INC.

Total members who have paid state dues
~ 1918 to 1929 inclusive ~



l figures shown in above chart appeared in treasurer's reports as published in Journals of the Florida Medical Association.

drawn upon in connection with work done in the legislature. All items of expense were approved by the Committee on Legislation as well as the Executive Committee before payment was made. The total disbursements under this item was $1,714.17, which covered attorneys' fees, traveling expenses, hotel bills, stenographic services, postage, etc. It is gratifying to know that although this unusual expense was incurred during the past year, sufficient money was available to defray all expenditures without placing the Association in debt or under financial obligations. To preserve the dignity and prestige of organized medicine, it is imperative that a certain amount of financial resources be available. It was, therefore, an act of wisdom on the part of our Association to place its business affairs in a thrifty condition.

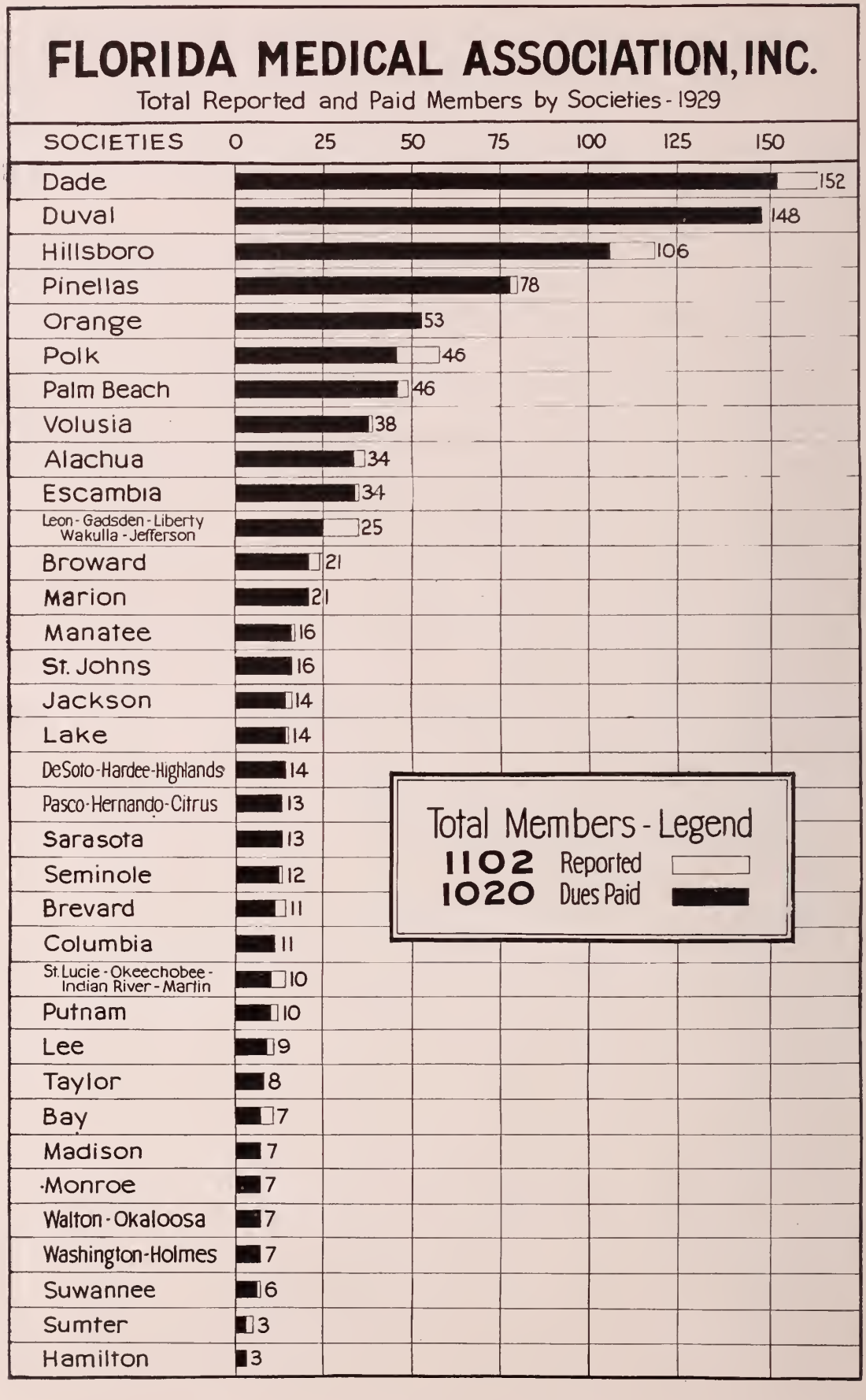
The audited report of our books up to and including April 21, 1930, shows a balance of $18,384.75. The following financial statements, together with report of Ford, Fisher, Boyd & Colley, certified public accountants, is submitted for your approval:

FORD, FISHER, BOYD & COLLEY
ACCOUNTANTS AND AUDITORS

JACKSONVILLE, FLA.
April 29, 1930.

DR. SHALER A. RICHARDSON,
Treasurer, Florida Medical Association,
Jacksonville, Florida.

DEAR SIR: This is to certify that we have examined the attached statements of Cash Receipts and Cash Disbursements for the period from March 21, 1929, through


FLORIDA MEDICAL ASSOCIATION, INC.
Total Reported and Paid Members by Societies - 1929
SOCIETIES
0
25
50
75
100
125
150
Dade 152
Duval 148
Hillsboro 106
Pinellas 78
Orange 53
Polk 46
Palm Beach 46
Volusia 38
Alachua 34
Escambia 34
Leon - Gadsden - Liberty Wakulla - Jefferson 25
Broward 21
Marion 21
Manatee 16
St. Johns 16
Jackson 14
Lake 14
DeSoto - Hardee - Highlands 14
Pasco - Hernando - Citrus 13
Sarasota 13
Seminole 12
Brevard 11
Columbia 11
St. Lucie - Okeechobee - Indian River - Martin 10
Putnam 10
Lee 9
Taylor 8
Bay 7
Madison 7
Monroe 7
Walton - Okaloosa 7
Washington - Holmes 7
Suwannee 6
Sumter 3
Hamilton 3
Total Members - Legend
1102 Reported
1020 Dues Paid

April 21, 1930. These statements have been prepared by Dr. S. G. Thompson, Business Manager of the Florida Medical Association, and the Florida Medical Journal and correctly reflect the total amounts received and disbursed as shown by the books.

In accordance with your instructions, we have checked the total of the collections shown by the statements with the corresponding total shown by the books, and found them to be in agreement.

Cancelled checks were examined and compared with the entries in the Cash Disbursement Book; the Cash Book was added and all postings checked to the General Ledger; and the General Ledger was added and a Trial Balance taken off as of April 21, 1930.

Bank Accounts were reconciled with the bank statements.

As we do not have access to the records of the various County Societies for the purpose of checking the remittances for dues, attention is directed to Exhibits D and F which show the amounts received from each County Society during the year and dues cancelled, respectively. The inspection of these Exhibits by the officers of the respective Societies will enable them to verify the correctness of the remittances and cancellations shown.

Income from Journal advertising was verified substantially by an examination of the contracts with advertisers.

We find that the books have been well and neatly kept. Your Manager is entitled to commendation for the care and skill with which this work is done.

Yours very truly,
FORD, FISHER, BOYD & COLLEY.

FBC:W

CONSOLIDATED CASH STATEMENT
March 21, 1929, through April 21, 1930.

Receipts

Cash in Bank, March 20, 1929		$16,239.61
Dues Collected (Exhibit "D")	$10,540.00	
Earnings from Advertising (Exhibit "E")	4,034.02	
Subscription and Miscellaneous sale of Journal	22.80	
Bonus from Cooperative Medical Adv. Bureau	196.80	
Interest on Savings Accounts	545.17	
Earnings—Technical Exhibits (Exhibit "C")	510.00—	15,848.79
Total Cash to be Accounted for		$32,088.40

Disbursements

General Fund, Expenses (Exhibit "A")	$ 5,344.91	
Journal Expense (Exhibit "B")	7,852.56	
Technical Exhibit Expense (Exhibit "C")	$154.18	
To Entertaining Society	306.00 460.18	
Furniture & Fixtures	37.50	
Library	8.50—	13,703.65
Balance in Bank, April 21, 1930		$18,384.75

EXHIBIT "A"

CASH STATEMENT—GENERAL FUND
March 21, 1929, through April 21, 1930.

Receipts

Cash as per last audit		$18,977.94
Back Dues Collected (Exhibit "D")	$3,070.00	
Current Dues Collected (Exhibit "D")	7,470.00—	10,540.00
Interest on Savings		545.17
Total Cash to be Accounted for		$30,063.11

Disbursements

Postage and Supplies	$ 151.43		
Telephone and Telegraph	114.25		
Salaries	2,499.00		
Secretary-Treasurer Salary	600.00		
Convention Expense	212.81		
Auditing Expense	12.50		
Bond of Treasurer	26.25		
Incidental Expense	14.50		
Legislative Committee Expense	1,714.17—	$5,344.91	
Furniture and Fixtures		37.50	
Library		8.50	
		$5,390.91	
To Journal Fund ($3.00 per member paid, 1929 and 1930 collections)		$3,162.00—	8,552.91
Balance			$21,510.20

EXHIBIT "B"

CASH STATEMENT—JOURNAL FUND
March 21, 1929, through April 21, 1930.

Receipts

As per last audit (overdraft)		—$ 2,905.25
Earnings from Advertising (Exhibit "E")	$ 4,034.02	
Subscription and Miscellaneous Sale of Journal	22.80	
Bonus from Cooperative Medical Advertising Bureau	196.80	
From General Fund	3,162.00—	7,415.62
Total Cash to be Accounted for		$ 4,510.37

Disbursements

Postage and Supplies	$ 262.40	
Telephone and Telegraph	76.29	
Salaries	2,546.43	
Editor's Salary	600.00	
Printing of Journal & Electrotypes	4,249.93	
Auditing Expense	12.50	
Convention Expense	36.76	
Bond of Treasurer	26.25	
Incidental Expense	42.00—	7,852.56
Balance—Overdraft		—$ 3,342.19
Plus Balance General Fund		21,510.20
Plus Balance Exhibit Fund		216.74
Net Cash Balance in Bank		$18,384.75

EXHIBIT "C"

CASH STATEMENT—EXHIBIT FUND
March 21, 1929, through April 21, 1930.

Receipts

Cash as per last audit	$ 166.92	
Earnings from Technical Exhibits	510.00—	$ 676.92

Disbursements

Postage and Supplies	$ 6.45		
Telephone and Telegraph	8.68		
Salaries	20.00		
Convention Expense	47.90		
Drawing, Printing, Sign Painting, etc.	71.15—	$ 154.18	
To Entertaining Society		306.00—	460.18
Cash Balance			$ 216.74

EXHIBIT "D"

DUES COLLECTED MARCH 21, 1929, THROUGH APRIL 21, 1930.

Name of Society	Total Members	No. Paid Members	No. in Arrears	1930 Dues Collected	Back Dues Collected
Alachua	34	30	4	290.00	60.00
Bay	8	4	4	30.00	20.00
Brevard	10	9	1	80.00	30.00
Broward	20	15	5	140.00	130.00
Columbia	11	7	4	60.00	
Dade	154	119	35	1,180.00	940.00
DeSoto-Hardee-Highlands	15	13	2	120.00	
Duval	152	104	48	1,030.00	220.00
Escambia	36	25	11	240.00	100.00
Hamilton	3	3	0	30.00	
Hillsboro	99	78	21	770.00	630.00
Individuals	7	0	7		
Jackson	14	9	5	80.00	130.00
Lake	14	14	0	130.00	50.00
Lee	12	10	2	90.00	20.00
Leon-Gadsden-Liberty-Wakulla-Jefferson	27	23	4	220.00	
Madison	7	0	7		30.00
Manatee	13	12	1	110.00	
Marion	20	16	4	150.00	50.00
Monroe	6	0	6		20.00
Orange	52	35	17	340.00	140.00
Palm Beach	47	31	16	300.00	80.00
Pasco-Hernando-Citrus	13	12	1	110.00	20.00
Pinellas	81	56	25	550.00	10.00
Polk	54	51	3	500.00	80.00
Putnam	10	6	4	50.00	20.00
St. Johns	13	11	2	100.00	20.00
St. Lucie-Okeechobee-Indian River-Martin	11	11	0	100.00	10.00
Sarasota	12	9	3	80.00	30.00
Seminole	11	11	0	100.00	20.00
Sumter	3	0	3		
Suwannee	6	4	2	30.00	
Taylor	10	6	4	50.00	
Volusia	37	29	8	280.00	140.00
Walton-Okaloosa	9	9	0	80.00	
Washington-Holmes	9	5	4	50.00	70.00
Totals	1,040	777	263	$7,470.00	$3,070.00

3,070.00 Back dues collected

$10,540.00 Total dues collected

EXHIBIT "E"

EARNINGS FROM ADVERTISING

March 21, 1929, through April 21, 1930.

April, 1929	$ 238.57
May	308.46
June	292.81
July	354.16
August	287.00
September	269.88
October	295.83
November	340.88
December	254.58
January, 1930	271.93
February	378.38
March	262.52
April	479.02
Total	$ 4,034.02

EXHIBIT "F"

NAMES OF MEMBERS DROPPED BY REASON OF REMOVAL, NON-PAYMENT OF DUES, ETC.

Name and Address	1929 dues	1930 dues
ALACHUA COUNTY MEDICAL SOCIETY:		
Getzen, S. P., Newberry	10.00	10.00
Weeks, P. D., High Springs	10.00	*
Whitlock, W. E., High Springs	10.00	*
BAY COUNTY MEDICAL SOCIETY:		
Blackshear, W. J., Panama City	10.00	*
Allen, W. T., West Bay	10.00	10.00
Lee, W. J., Panama City	10.00	10.00
Zediker, A. B., St. Andrew	10.00	10.00
BREVARD COUNTY MEDICAL SOCIETY:		
Adams, D. H., Titusville	10.00	
Stevens, H. J., Titusville	10.00	
Rose, Jno. R., Titusville	10.00	10.00
BROWARD COUNTY MEDICAL SOCIETY:		
Brush, S. P., Jamaica, N. Y.	10.00	
Maxwell, Leslie H., Ft. Lauderdale	10.00	
Klussman, Henry A., Ft. Lauderdale	10.00	
DADE COUNTY MEDICAL SOCIETY:		
Claxton, W. A., Melbourne	10.00	
Davis, H. F., Miami	10.00	10.00
Edwards, S. R., New York, N. Y.	10.00	
Haisfield, H. B., Miami	10.00	
Kitchens, F. E., Ponce de Leon	10.00	10.00
Martin, B. J., Miami	10.00	
O'Quinn, Leon H., Hialeah	10.00	10.00
Perry C. Larimore, Miami	10.00	10.00*
Simmons, J. A., Arcadia	10.00	
Smith, J. A., Homestead	10.00	10.00
Thomas, Merrick D., Opelika, Ala.	10.00	
Yarbrough, Henry C., Miami	10.00	10.00
Hart, O. J., New York, N. Y.		10.00
Jordan, W. B., Homestead		10.00
Maura, F. R., Miami		10.00
ESCAMBIA COUNTY MEDICAL SOCIETY:		
Hutchinson, C. E., Pensacola	10.00	
Pollock, W. A., Jr., Pensacola		10.00
HILLSBORO COUNTY MEDICAL SOCIETY:		
Clark, W. F., Tampa	10.00	
Farrior, L. B., Tampa	10.00	
Golden, H. M., Tampa	10.00	
Hopkins, W. B., Tampa	10.00	
Jones, A. B., Jr., Quitman, Ga.	10.00	

Name and Address	1929 dues	1930 dues
Maechtle, E. W., Evanston, Ill.	10.00	
Nelken, B. E., Tampa	10.00	
Oglesby, C. R., Bartow	10.00	
Rector, L. T., Tampa	10.00	
Rudisill, C. A., Tampa	10.00	
Williams, Horace J., Tampa	10.00	
Williams, John W., New Orleans	10.00	
Winton, M. R., Tampa	10.00	
JACKSON COUNTY MEDICAL SOCIETY:		
Boothe, W. R., Campellton	10.00	
Kennedy, R. L., Malone	10.00	
McLeod, R. F., Madison	10.00	
LAKE COUNTY MEDICAL SOCIETY:		
Lott, Walter M., Nashville, Tenn.		10.00
Morrison, Harry K., Leesburg	10.00*	
LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY:		
Beggs, John M., Chattahoochee	10.00	10.00
Brevard, E. M., Tallahassee	10.00	10.00
Cross, St. J. K., Havana	10.00	10.00
Dykes, Chapman, Carrabelle	10.00	10.00
Gwynn, G. H., Sr., Tallahassee	10.00	10.00
Hagan, J. A., Arran	10.00	10.00
Harrison, A. P., Tallahassee	10.00	*
Kemp, Malcolm T., Sopchoppy	10.00	10.00
Massey, W. W., Quincy	10.00	*
Sprague, Fred A., Carrabelle	10.00	10.00
LEE COUNTY MEDICAL SOCIETY:		
Stone, Geo. S., Ft. Myers	10.00	*
Winkler, Wm. B., Ft. Myers	10.00	
MANATEE COUNTY MEDICAL SOCIETY:		
Sporman, MacCrellous P., Manatee	10.00	
ORANGE COUNTY MEDICAL SOCIETY:		
Davila, J. A., Rapid City, S. D.	10.00	
Ford, J. A., Orlando	10.00	
Scott, Sam. R., Ocoee	10.00	
PALM BEACH COUNTY MEDICAL SOCIETY:		
Cason, J. R., Delray	10.00	10.00
Henry, Gordon F., W. Palm Beach	10.00	10.00
Smart, B. F., Miami	10.00	10.00
Wilson, Martha, W. Palm Beach	10.00	10.00
PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY:		
MacGregor, G. G., Concord, N. H.	10.00	
PINELLAS COUNTY MEDICAL SOCIETY:		
Hudson, Arthur T., St. Petersburg	10.00	10.00
Kumm, F. F., Wadena, Minn.	10.00	
POLK COUNTY MEDICAL SOCIETY:		
Bevis, W. M., Northport, L. I., N. Y.	10.00	10.00
Dickinson, W. P., Lakeland	10.00	
Eide, A. T., Haines City	10.00	*
Gilbert, R. E., Winter Haven	10.00	*
Irons, F. E., Winter Haven	10.00	*
Justice, Robt. L., Haines City	10.00	
Leffers, R., Sr., Lakeland	10.00	10.00
Maynard, Ben H., Lakeland	10.00	10.00
Pennington, B. Y., Lake Wales	10.00	*
Ragsdale, V. H., Pierce	10.00	10.00
Roberts, T. H., Lakeland	10.00	10.00
Williams, E. L., Ft. Meade	10.00	*
PUTNAM COUNTY MEDICAL SOCIETY:		
Brantley, Z., Grandin	10.00	10.00
Johnson, H. A., Palatka	10.00	10.00
ST. JOHNS COUNTY MEDICAL SOCIETY:		
Spencer, J. J., St. Augustine		10.00
Worley, S. C., St. Augustine		10.00
ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN COUNTY MEDICAL SOCIETY:		
Dunn, J. C., Corpus Christi, Texas	10.00	
Harrell, G. L., Vero Beach	10.00	*
Lingo, M. J., Okeechobee	10.00	*
McDermid, H. C., Okeechobee	10.00	*
SEMINOLE COUNTY MEDICAL SOCIETY:		
Robson, J. N., Sanford	10.00	
SUMTER COUNTY MEDICAL SOCIETY:		
Cherry, H. S., Center Hill	10.00	
Clarke, K. C., Bushnell	10.00	
SUWANNEE COUNTY MEDICAL SOCIETY:		
Green, O. F., Mayo	10.00	
VOLUSIA COUNTY MEDICAL SOCIETY:		
DuBois, H. K., Port Orange	10.00	10.00
Carter, L. A., Bunnell	10.00	
Mann, John M., Starke	10.00	
	910.00	390.00
Dues of Secretaries	10.00	300.00
	920.00	690.00
		920.00
Total		$1,610.00

*Reinstated.

ASSETS AND LIABILITIES
April 21, 1930.

Assets

Cash in Bank	$ 892.18
General Fund—Accounts Receivable	2,630.00
Journal—Accounts Receivable	51.76
Furniture and Fixtures (less depreciation)	117.23
Library	82.00
Stationery Inventory	105.81
Savings—Atlantic National Bank	6,485.21
Florida National Bank	4,830.08
Barnett National Bank	6,177.28
	$21,371.55

Liabilities

Capital Account	$21,371.55

ADVERTISING

The total earnings from advertising were $4,034.02 since last year's report, which, of course, is for a period of thirteen months, instead of twelve, owing to the fact that the state meeting this year is one month later than usual. Because of conditions all over the country, many of the large firms have endeavored to curtail expenses by withdrawing from the advertising field. Your Journal has felt this very keenly and you will note that the advertising income is somewhat below the earnings for the last two years. However, your officers feel that under present conditions, a fair showing has been made through efforts to secure contracts for advertising space in the Journal. A little help from the entire membership of our Association along the line of a real effort to secure contracts for advertising would yield splendid returns and build up the resources of the treasury.

JOURNAL

The progress of organized medicine is reflected through your Journal as it makes its appearance monthly, not only to all parts of the state of Florida but all over the United States. Through the exchange with other state medical associations, your Journal finds its way to the libraries of the different state associations and the libraries of the large hospitals; also, other institutions and individuals pay a subscription price for the information contained in your publication.

Original articles should form the most important part of your Journal. It is your opportunity to put on record valuable information for the benefit of your colleagues and it is hoped that during the coming year more interest will be taken in the preparation and publication of original articles. Your Executive Committee has authorized the payment of one-half the cost of cuts for illustrating original articles. This has been done to encourage authors to illustrate their articles. You have doubtless noticed several articles recently that have been splendidly illustrated. Many favorable comments have been received in connection with the illustration of certain articles that have already appeared.

The efforts of the Committee on Publication should receive special mention. Dr. G. H. Edwards of Orlando and Dr. Roy J. Holmes of Miami have very generously given of their time to the review of original articles for publication and the entire membership of our Association should be very grateful to these two members for the unusual amount of time they have so freely given.

The secretaries and officers of component county societies have been very cordial in their responses to the postal card system which has been used in an effort to secure state-wide news that would be of interest to the membership. One new feature this year in the postal card system is that a permit has been secured through the post office, relieving the sender of affixing postage to the card when sending news items. In this way, the postal cards may be distributed freely over the state and postage is only paid when the card is actually used for the purpose of contributing a news item.

The checking of all newspapers in the state for news items has been carried on during the year and many interesting and helpful items have been secured in this manner. A great deal of time and effort is being spent to make the state news item column of interest to the readers of the Journal.

Appreciation of the regularity with which the Journal has been mailed on the twentieth of each month has been evidenced by the fact that the one time it was necessarily late, *i. e.*, in April, when the program could not be completed on scheduled time, some of the members immediately made inquiry regarding the whereabouts of the Journal. The fact that the missing of the mailing date by two days was noticed bespeaks the promptness with which the regular mailing schedule is carried out.

TECHNICAL EXHIBITS

Last year the business office took over the sale of exhibit spaces and the result apparently proved satisfactory, not only to the entertaining society but to the entire membership. St. Augustine, the meeting place, was rather centrally located and a total of $960.00 was collected for the sale of exhibit spaces. This necessarily took considerable time and an outlay for building booths, postage, stenographic help, printing, etc. The major part, or 60% of the gross income, was turned over to the entertaining society to assist in defraying necessary expenses in connection with the annual meeting. This year, owing to certain conditions, the income has been somewhat less. However, we feel that under the circumstances, quite a creditable showing has been made.

You are urged to visit the different exhibits on the mezzanine floor. Possibly you will find something of interest that has not already come to your attention and show, by your interest, that it was worth the exhibitor's while to come to Pensacola. If the exhibitors are to continue to patronize our Association, we must show them that we are interested in what they have to offer.

GROUP INSURANCE

The question of group insurance for members of your Association was taken up by the Executive Committee. The business office, in order to cooperate, on November 9, 1929, mailed a questionnaire to all of the state medical associations to secure the necessary data on which to base conservative recommendations. The name of insurance company (if any); number of members availing themselves of group insurance; cost to individual members; maximum amount of protection for a single claim; classification of premiums, if malpractice insurance written through state association, and several other items of interest were included in the inquiry. All replies and information secured in this manner have been turned over to the Executive Committee for their perusal and advice to the Association.

OTHER ACTIVITIES

The business office is being used as a service station for all committees. There has been a marked increase in the number of letters and telegrams handled for committee chairmen and officers.

In the printed program this year, you will find a number of additions for your guidance and convenience, such as a statement of unfinished business and an outline of the new business to be taken up at the different meetings. This will give the members advance notice of the time the scheduled items of business will come up.

A notice was sent to each county society sixty days prior to this meeting, relative to the proposed changes in the Constitution and By-Laws. Mimeographed sheets have been prepared and will be distributed during the meeting at which these proposed changes will come up.

The highest gift bestowed by this Association is given to a member when elected to the presidency. In order that a record of the past presidents may be officially preserved, the names and years appear in the back of the program and also in the April Journal. It is planned to reproduce and add to this list each year in the future.

The officers are doing everything in their power to carry on the work of the Association in a systematic and efficient manner and it is hoped that their efforts may meet with your approval.

Respectfully submitted,

SHALER RICHARDSON,
Sec'y-Treas.-Editor of the Journal.

STEWART G. THOMPSON,
Business Manager.

Motion made by Dr. L. M. Anderson of Lake City, that the joint report of the secretary-treasurer and business manager be accepted. Motion seconded and carried.

The report of the Executive Committee was then presented by Dr. Gerry R. Holden, Chairman, Jacksonville.

REPORT OF EXECUTIVE COMMITTEE

To the President and Members of the Florida Medical Association in Session at Pensacola, Florida:

GENTLEMEN:

The Executive Committee wishes to report as follows:

On April 28, 1929, a called meeting of the Executive Committee was held at the office of the Chairman. All members of the committee were present.

Various matters connected with the ensuing year were considered.

The estimated expenses for the year were carefully gone over in detail and a budget was finally adopted. We are glad to say that the expenses for this year have not exceeded this budget.

Various meetings and conferences have been held as were necessary during the year whenever any questions were brought up which required action on the part of the Executive Committee.

Early in the year it was brought to our attention that the cost of malpractice insurance to the individual members of the Association was, in some parts of the state, unduly high and that the rates for such insurance were not uniform in all parts of the state. This Committee therefore, made a rather extensive study of group malpractice insurance as it is at present carried out by various other state associations.

We are now in a position to obtain for the Florida State Medical Association a system of group malpractice insurance which will lower the rates to our individual members from 30 to 50 per cent.

We therefore, recommend that the House of Delegates authorize the incoming Executive Committee to conclude these arrangements for group malpractice insurance.

Respectfully submitted,

GERRY R. HOLDEN,
Chairman;
MOZART A. LISCHKOFF,
EDMUND W. WARREN.

Motion made by Dr. M. A. Lischkoff, Pensacola, that the report of the Executive Committee be received and adopted. Motion seconded and carried.

In the absence of the chairman, Dr. Herman Watson, the report of the Committee on Legislation and Public Policy was read by Dr. E. G. Peek of Ocala.

REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY

By instruction of your association, the major objective of the committee during the past year was to secure the enactment of a Basic Science Law.

The committee first informed itself as to provisions of similar acts in other states and then with the aid of legal counsel prepared what they believed to be a workable and a practical bill, which was introduced in both houses of the legislature.

We found that there was a tremendous organization opposing the Basic Science Law and yelling, "Medical Trust", which sounds plausible to the average legislator.

Probably, however, the most serious hindrance to the work of the committee was the opposition which arose within the medical profession, but in face of this opposition the committee was sincere in its efforts to accomplish what it conceived to be the greatest good to the Association, without questioning the sincerity of those opposing the measure.

The committee held several meetings during the various stages of its work, and at the time the bills were presented to a joint committee of the Senate and House, your committee was joined by the President of your association, Dr. Dozier, ten or twelve councilors, and others.

With some amendments, the bill was reported favorably by this joint committee but was never voted on either by Senate or House.

The committee made three trips to Tallahassee, and on May 12th there was a conference between the officers, councilors and other members of the Association held in Ocala. Three paid workers were kept in Tallahassee for varying periods of time.

Although the last session of the Association voted to allow an expenditure not to exceed $5,000, the committee only expended $1,714.17, of which $100.00 was for bill due by the former committee, and $84.84 for expenditures made by the President and Executive Committee, in assistance rendered this committee, leaving a balance of $1,529.33, an accounting of which is attached hereto.

The various cults have been very successful in securing legislation which is favorable to them, as shown by the following: Chapter 12287, Sec. 13, enacted by Legislature of 1927, State of Florida:

"Osteopathic physicians and surgeons will observe and be subject to all state and municipal requirements relative to reporting births and deaths and all matters pertaining to public health, with equal rights and obligations as physicians of other schools of medicine, and such reports shall be accepted by the officers of the departments to which the same are made. Osteopathic physicians and surgeons licensed hereunder shall have the same rights as physicians and surgeons of other schools of medicine, with respect to the treatment of cases and holding of offices in public institutions."

Also, Chap. 12286, Sec. 1, Acts 1927, reads in part:

"Naturopathic practice employs among other agencies Phytotherapy, dietetics, Psyco-therapy, Suggesto-therapy, Hydro-therapy, Zone-therapy, Bio-chemistry, external applications, Electro-therapy, Mechano-therapy, mechanical and electrical appliances, hygiene, first aid, sanitation, and Heliotherapy."

The chiropractors were not quite so ambitious, as shown by Chap. 19, Sec. 3446, of the acts of 1927:

"Any chiropractor who has complied with the provisions of this Chapter may adjust by hand the articulation of the spinal column, but shall not prescribe or administer to any person any medicine or drug now or hereafter included in materia medica, or perform any surgery, except as hereinabove stated, nor practice obstetrics or osteopathy."

These acts were all enacted by the Legislature of 1927, and so far as we can find out without opposition from the medical profession. This clearly gives the osteopaths and naturopaths the same privileges as are given the graduates of medicine or surgery.

We find that there are from one to a half dozen reciprocity bills introduced in every session of the legislature, which to the average legislator appear fair and just.

There is a strong tendency to enact these bills in the laws because of the general attitude in the state to do everything possible to induce people to move to Florida.

We were able, however, with the assistance of the medical profession who are members of the legislature, to keep these bills off the calendar.

We believe that it is next to impossible to get any medical legislation without active work being done by individual members of this association and the constituent county societies on their own representatives and senators, and that the societies should assume their responsibility and not depend entirely upon a committee of three to go to Tallahassee and do the work among the legislators, many of whom are strangers to them.

We would suggest that in the future the officers of the Association outline a definite policy, and that they see that every legislator is interviewed before the legislature convenes, and that the danger of unwise medical legislation be thoroughly explained to them, as the Capitol at Tallahassee is filled with lobbyists or advocates for or against practically every bill presented, and every legislator is receiving one telegram after another for and against such bills until they cease to pay much attention to such things. The foun-

dation for our work, therefore, should be laid long before the legislature convenes.

LEGISLATIVE COMMITTEE EXPENSE

Date	Item	Amount
May 3, 1929	Mrs. W. B. Leslie, multigraphing	$ 14.50
May 14	Mrs. A. Callan, multigraphing	7.00
May 14	Telegrams sent by Chairman	28.91
June 12	W. M. Howell, salary and expenses	280.00
June 14	Postal Telegraph	14.25
June 26	Western Union	87.91
June 26	Postal Telegraph	2.19
July 31	Western Union	11.89
Mar. 14, 1930	Chairman's expenses	137.68
	Chas. E. Stewart, Atty	325.00
	Judson & Bentley	75.00
	Dr. W. H. Cox	35.00
	Dade County Medical Society	200.00
	Mrs. Wm. Steitz, salary and expenses	310.00
		$1,529.33

Motion made by Dr. Gerry R. Holden of Jacksonville to adopt the above report. Motion seconded and carried.

The report of the Committee on Medical Education and Hospitals was presented by Dr. John E. Boyd, Chairman, Jacksonville, as follows:

REPORT OF MEDICAL EDUCATION AND HOSPITAL COMMITTEE
May, 1930.

At the time of the annual meeting of this Association in 1929, fourteen hospitals, or 17 per cent of those hospitals in the state having 25 or more beds, were on the *standardized list* of the American College of Surgeons. Four, or 33 1/3 per cent of those having 100 or more beds, were on the "*Approved List for Internes*" of the American Medical Association. Since that time fourteen additional hospitals have complied with the minimum requirements of the College and one more has been placed on the Approved List of the A. M. A. Council.

The "*minimum requirements,*" adopted by the Executive Committee of the Florida Medical Association, were published in the October issue of the Journal. At the same time an editorial appeared urging all hospitals in the state, not then standardized, to comply with these requirements, so as to be included in the "Approved List" which was to be published later. Your committee wrote a letter to every hospital of twenty-five or more beds, not then approved by the College, calling their attention to the matter and offering our services in aiding them to rectify the trouble. We also wrote a letter to every hospital of less than twenty-five beds calling their attention to the Association's plan to secure recognition and help for them. No pains have been spared in an attempt to stimulate the interest of these hospitals as well as to render them every possible assistance. The members of the Committee agreed to personally visit and inspect any hospital requesting it. The idea of this visit was first to see if the hospital met the requirements, second, if not, to advise and work with the management to that end. There is no provision for the expenses incident to trips of this kind.

Dr. Dana F. Clark, visitor from the American College of Surgeons, inspected forty-two hospitals of twenty-five or more beds during the year 1929. Fourteen of these hospitals *failed* to comply with the minimum requirements, eight were *conditionally* approved, and twenty were *fully* approved. There were five hospitals of this class which he did not visit; the Committee presumes that these hospitals failed to make any effort to obtain the inspection. It is interesting to note, at this time, that every one of the nine hospitals, recommended to the College last year by your hospital committee, qualified for standardization.

Fifty-nine letters were sent out by your committee and only four hospitals saw fit to reply or sought our help. This seems very discouraging until the situation has been properly analyzed. Forty of these hospitals were of less than twenty-five bed capacity. When we recall that such hospitals have heretofore been ignored in the scheme of standardization it is not to be wondered at that they are slow in responding to the educational program undertaken by this Association. If the committee retains its enthusiasm and the members of the Association will individually stand back of the effort, we are convinced that the campaign will ultimately result in the compliance of all those hospitals honestly interested in rendering good service to their patients, while those not so interested are going to find it hard to keep open.

Of the four hospitals which displayed interest in the matter, Dr. Harry F. Watt inspected the Panama City Hospital, and Dr. John S. Helms inspected Bradenton General Hospital and the Joseph Halton Hospital. He will visit the Melbourne Hospital later. In each instance the visitor put aside all plain criticisms and gave his time to calling attention only to those things that prevented the hospital from qualifying with the standard adopted by the Association. He further attempted to suggest the simplest method for correcting the shortcomings. The visit was in each case followed by a letter of encouragement

and the hospital was urged to keep in touch with its visitor until the desired end was attained.

During the past year we have investigated and reported on three bacteriological and pathological laboratories for the Council of the American Medical Association.

In closing this report it is our unanimous opinion that the recommendations for an Approved List of Hospitals and the new method of appointing the members of this committee is sane and safe. We urge the House of Delegates to vote its transcription into the By-Laws of the Association.

Respectfully submitted,

JOHN E. BOYD,
Chairman;
HARRY F. WATT,
JOHN S. HELMS,
Committee.

Motion made by Dr. L. M. Anderson of Lake City, that the above report be adopted. Motion seconded and carried.

At the request of Dr. John S. Helms, Tampa, Dr. Dozier relinquished the chair in favor of Dr. J. M. Hoffman, vice-president.

Dr. Helms then made the following motion: "That you (Dr. Hoffman) appoint a committee of reference on the presidential address to use these constructive suggestions to formulate plans for carrying them out so that the profession of this state may be benefited thereby, the report of this committee to be brought in before the final session of this Association."

The above motion being seconded and unanimously carried, Dr. Hoffman appointed the following members to serve on such committee:

Dr. John S. Helms, Tampa.

Dr. Gerry R. Holden, Jacksonville.

Dr. J. H. Pierpont, Pensacola.

Dr. J. M. Irwin, St. Augustine.

There being no further business to come before the meeting, on motion duly made, seconded and carried, the meeting adjourned.

SCIENTIFIC ASSEMBLY

At 2 p.m., May 6th, the Scientific Assembly convened and the following papers were read and discussed:

"A Comparative Study of Prophylaxis and Therapy of the Acute Infections of Florida Children", William McKibben, Miami.

"Auricular Fibrillation", Spencer A. Folsom, Orlando.

"Laboratory Examination of Surgical Tissue" (with lantern slides), Clayton E. Royce, Jacksonville.

"Insomnia", H. Mason Smith, Tampa.

"Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis", M. J. Flipse, Miami.

MEETING OF THE HOUSE OF DELEGATES

The meeting of the House of Delegates was called to order at 5 p.m., May 6th, by Dr. H. C. Dozier, president. The delegates elected by the various county societies were then called with instructions that if the delegates were not present, the alternates, if present, should be seated. The roll call of the secretary showed the following delegates, alternates or substitutes present:

DELEGATES

BREVARD COUNTY MEDICAL SOCIETY—
I. M. Hay

COLUMBIA COUNTY MEDICAL SOCIETY—
L. M. Anderson

DADE COUNTY MEDICAL SOCIETY—
B. H. Palmer
M. J. Flipse
Wm. W. McKibben
R. O. Lyell

DUVAL COUNTY MEDICAL SOCIETY—
Kenneth Morris
Edward Jelks
Wm. S. Manning
Luther Holloway
J. M. Bryant
Ernest B. Milam

ESCAMBIA COUNTY MEDICAL SOCIETY—
H. L. Bryans
J. M. Hoffman

HILLSBORO COUNTY MEDICAL SOCIETY—
W. M. Rowlett
Bundy Allen
A. M. C. Jobson

JACKSON COUNTY MEDICAL SOCIETY—
M. Q. Burns

LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY—
J. Q. Folmar

MARION COUNTY MEDICAL SOCIETY—
A. H. Freeman

ORANGE COUNTY MEDICAL SOCIETY—
G. H. Edwards
Wm. H. Spiers

PALM BEACH COUNTY MEDICAL SOCIETY—
W. L. Shackelford
W. O. Arnold

PINELLAS COUNTY MEDICAL SOCIETY—
A. J. Wood
O. O. Feaster
H. E. Winchester

POLK COUNTY MEDICAL SOCIETY—
Walter A. Weed

PUTNAM COUNTY MEDICAL SOCIETY—
E. W. Warren

ST. JOHNS COUNTY MEDICAL SOCIETY—
J. M. Irwin

SUMTER COUNTY MEDICAL SOCIETY—
S. C. Wood

TAYLOR COUNTY MEDICAL SOCIETY—
J. C. Ellis

VOLUSIA COUNTY MEDICAL SOCIETY—
J. Ralston Wells
M. J. Myres

Walton-Okaloosa County Medical Society—
A. G. Williams

Alachua, Bay, Broward, DeSoto-Hardee-Highlands, Hamilton, Lake, Lee, Madison, Monroe, Pasco-Hernando-Citrus, St. Lucie-Okeechobee-Indian River-Martin, Sarasota, Seminole, Suwannee, Washington-Holmes County Medical Societies were not represented.

Motion made, seconded and carried to seat as delegates members from societies from which delegates and alternates were absent.

Motion made to dispense with reading the minutes of the last meeting, and to adopt the minutes as published in the April, 1929, issue of the Journal. Voted and carried.

The next order of business was the consideration and final action on the following amendments to the Constitution and By-Laws proposed at the St. Augustine meeting last year:

NOMINATING COMMITTEE

Section 2-a shall be added to Article VII of the Constitution: "Section 2-a. The nominating committee shall consist of the last five past presidents of the Association and this Committee shall nominate all officers of the Association for election for the ensuing year. Additional nominations may be made from the floor."

Motion made by Dr. M. J. Flipse, and unanimously carried, that the above amendment be not adopted.

COMMITTEES

Add to By-Laws, Chapter 8, Section 1, the following: "a Committee on Medical Education and Hospitals" and "Committee on Nominations."

Motion by Dr. L. M. Anderson that the above amendment be amended to read as it does with the exception of the Committee on Nominations. Motion seconded and carried.

The amendment as adopted, reads:

"Section 1. Regular Committees shall be the Executive Committee, a Committee on Scientific Work, a Committee on Legislation and Public Policy, a Committee on Publication, and a Committee on Medical Education and Hospitals. They shall be appointed by the President. The Committee on Arrangements shall consist of the component society where the annual session is to be held.

MEDICAL EDUCATION AND HOSPITALS

By-Laws, Chapter 8, Section 6, to be added as follows:

"Section 6. The Committee on Medical Education and Hospitals shall consist of three members to serve; one for a period of three years, one for two years, and one for one year, the vacancy created each year being filled by appointment to serve a three-year term. This Committee shall serve in this state for the Council on Medical Education and Hospitals of the American Medical Association, and shall have referred to it all questions pertaining to hospitals and medical education."

On motion duly made, seconded and carried, the above amendment was adopted.

HONORARY MEMBERS

Article IV of the Constitution shall be amended to include: "Section 5. *Honorary Members*—Honorary and retired members of the Florida Medical Association may be elected by the House of Delegates or by the Executive Committee either directly or upon nomination officially made by a component County Medical Society. An honorary or retired member shall be exempt from all dues in this association; shall not have the right to vote; shall be permitted to subscribe for the publication of the Association at a special price to be made by the House of Delegates or Executive Committee; shall have the right to attend meetings and be eligible to such other privileges as may be granted by the House of Delegates."

On motion duly made, seconded and carried, the above amendment was adopted.

The President then called for nomination of delegates to the American Medical Association.

The following members were nominated to fill the two-year term beginning in 1931:

Dr. M. J. Flipse, Miami.

Dr. G. H. Edwards, Orlando.

Dr. L. M. Anderson, Lake City.

Voted by ballot with Drs. Wells and Shackleford acting as tellers. Dr. Edwards received 12 votes, Dr. Anderson 9, and Dr. Flipse 8. Dr. Edwards elected delegate for two years, beginning in 1931.

Dr. Bundy Allen, Tampa, was then nominated for alternating delegate for two years, and elected by virtue of having no opposition.

Dr. F. C. Moor of Tallahassee was nominated for one year to fill the unexpired term of Dr. Love. Dr. Moor elected.

The next order of business was the selection of a meeting place for 1931. Dr. G. H. Edwards, of Orlando, extended an invitation from the Orange County Society to meet in Orlando next year. Upon motion made, seconded and carried, this invitation was unanimously accepted and Orlando selected for the 1931 meeting.

The following retired physicians were nominated and unanimously elected to honorary membership in the Association:

Dr. H. K. DuBois, Volusia County.

Dr. S. G. Worley, St. Johns County.

Dr. W. S. Persons, Orange County.

Dr. Walter Hood, Marion County.

Dr. L. M. Anderson of Lake City moved that a committee of three members be appointed to confer with the present Executive Committee and with the incoming Executive Committee in the matter of group liability insurance, and to act if they see proper. Dr. Anderson's motion was withdrawn, and the following substitute motion offered and adopted:

That the out-going Executive Committee confer with the new Executive Committee to be appointed by the new President, and that the new Executive Committee after conference with the old Executive Committee have power to act for the association with reference to whether or not this insurance be taken.

Motion made to set aside $10,000.00 of present funds in a trust fund to be controlled by the ten immediate past living presidents. It was also stipulated that the moneys invested must be placed in such securities as are approved by the New York Law as affecting investments for Life Insurance Companies. Dr. E. B. Milam, Jacksonville, offered a substitute motion that this matter be referred to the incoming Executive Committee to make investigations and report to the House of Delegates at the next session, with recommendations.

The substitute motion voted and carried.

There being no further business, the meeting adjourned.

SCIENTIFIC ASSEMBLY

The second meeting of the Scientific Assembly convened at 9 a.m., May 7th. The following papers were read and discussed:

"Spider Poisoning", Henry E. Palmer, Tallahassee.

"Ophthalmoscopic Diagnosis as Pertains to General Medical and Surgical Conditions" (with lantern slides), Shaler Richardson, Jacksonville.

"Newer Methods in the Treatment of Nisserian Infection in the Female", J. M. Bryant, Jacksonville.

"Acute Pancreatitis from a Diagnostic Standpoint, with a Report of Three Cases", William W. Massey, Quincy.

"A Review of Some Cases of Obstruction of the Bowel with Partial Study of Writer's Own Work", J. S. Turberville, Century.

"Free Tendon Grafts in the Fingers. Report of Case", Kenneth A. Morris, Jacksonville.

THIRD GENERAL SESSION

The General Session of the Florida Medical Association again convened at 2 p.m., Wednesday, May 7th. The meeting was called to order by Dr. Henry C. Dozier, President. The Chair declared nominations for president in order.

Dr. M. A. Lischkoff of Pensacola was nominated for president by Dr. J. H. Pierpont of Pensacola. The nomination was duly seconded. Dr. Julius C. Davis of Quincy was nominated for president by Dr. Henry E. Palmer, of Tallahassee. Nomination duly seconded. Vote by ballot, with Drs. McIver, Rowlette and Shackleford appointed tellers, resulted as follows:

Dr. Lischkoff, 46; Dr. Davis, 48.

Dr. Davis was then escorted to the Chair by Dr. Henry E. Palmer and Dr. F. C. Moor.

"Ladies and Gentlemen of the Florida Medical Association: I have had two great shocks since I arrived in Pensacola, and don't know whether I will recuperate or not. First, Monday morning I went down to the hotel lobby and was greeted by a physician who informed me that I was a candidate for the presidency. I stated positively I was not. He informed me that that was just exactly the reason they were running me. In coming to me the way it has, I certainly appreciate it. I have had no aspiration to be president of the Florida Medical Association. I refused twice before to allow my name to be voted upon by the Association. I have received several letters during the last few months, but to each one I answered that I was positively not a candidate. As I have said, coming to me in the way that it has, I certainly appreciate it. In fact, I know of nothing that I could appreciate more."

Dr. Davis then stated that nominations for first vice-president were in order.

Dr. W. C. Payne of Pensacola was nominated for first vice-president by Dr. G. H. Edwards. Nomination seconded by Dr. Freeman. Motion made, seconded and carried that the secretary cast the ballot for the first vice-president.

Dr. W. H. Spiers of Orlando was nominated for second vice-president by Dr. H. D. Van Schaick. Dr. Anderson moved that the nominations be closed and the secretary cast a ballot for the second vice-president. Motion seconded and carried.

Dr. M. J. Flipse of Miami was nominated for third vice-president by Dr. E. B. Milam. Nomination seconded by Dr. Anderson. Motion made, seconded and carried that the nominations be closed and the secretary cast a ballot for the third vice-president.

Dr. Shaler Richardson of Jacksonville, nominated for secretary-treasurer by Dr. L. M. Anderson of Lake City. Seconded by Dr. Dozier. Motion by Dr. Rowlett that nominations be closed and the president cast the ballot for the secretary-treasurer. Motion seconded and carried.

Dr. L. M. Anderson was then appointed by Dr. Davis to present the past president's emblem to the retiring president, Dr. Henry C. Dozier.

"Dr. Dozier, I am afforded the greatest pleasure I have had for many a day. The Florida Medical Association has seen fit to remember you, Sir, for your courtesy in presiding over it, and for your work in the professional line. You have earned the recognition of this Association, Sir, and this button I am going to pin on you, I hope you will wear for all time to remember the pleasant association that the Florida Medical Association has had with you."

Dr. Gerry R. Holden of Jacksonville then submitted the following report of the committee on the presidential address:

"The Committee recommends that the suggestions of Dr. Dozier, as given in his address, be accepted by this Association, and he be used as a guide in carrying out a five-year program of medical education for the laity.

We recommend that the Executive Committee be made responsible for carrying out this program and be empowered to select such other members of the Association as they see fit to assist them in developing this program."

Motion by Dr. Helms that the above report be adopted as read.

Dr. Henry Hanson: "I wish to second that motion, and to say that I think that is possibly one of the most constructive means of overcoming some of the unfavorable and non-cooperative attitudes which exist throughout the State both in regard to medical legislation and about the improvement of the general health conditions."

Motion voted and carried.

Meeting adjourned upon motion, duly seconded and carried, sine die.

SCIENTIFIC ASSEMBLY

The third meeting of the Scientific Assembly convened at 2 p.m., May 7th. The following papers were read and discussed:

"Some Considerations of Blood Transfusion. Report of a Fatality", George W. Richardson, Jacksonville.

"Rational X-ray and Radium Therapy", Walter A. Weed, Lakeland.

"Luetic Heart Disease with Case Report", Herbert Caldwell, Lake City.

"Two Aspects of Hypertension" (with lantern slides), M. J. Myres, Daytona Beach.

"Malaria Control", F. A. Brink, Jacksonville.

REGISTRATION

The following registered during the Fifty-seventh Annual Meeting of the Florida Medical Association, held in Pensacola, May 6th and 7th:

OFFICERS

Dozier, Henry C., President Ocala
Hoffman, J. M., Second Vice-President Pensacola
Richardson, Shaler, Secy-Treas. Jacksonville
Thompson, Stewart G., Business Manager .. Jacksonville

Bay County Medical Society

Fraser, Donald S. Panama City
Nixon, J. M. Panama City

Brevard County Medical Society

Hay, I. M. Melbourne

Columbia County Medical Society

Anderson, L. M. Lake City
Bates, T. H. Lake City
Caldwell, Herbert Lake City

Dade County Medical Society

Flipse, M. J. Miami
Lyell, R. O. Miami
McKibben, W. W. Miami
Palmer, Bascom H. Miami

Duval County Medical Society

Boyd, John E. Jacksonville
Brink, F. A. Jacksonville
Bryant, James M. Jacksonville
Driskell, S. E. Jacksonville
Hanson, Henry Jacksonville
Harris, Herrman H. Jacksonville
Holden, Gerry R. Jacksonville
Holloway, Luther W. Jacksonville
Jelks, Edward Jacksonville
Kirk, W. W. Jacksonville
McIver, Robt. B. Jacksonville
Manning, W. S. Jacksonville
Milam, E. B. Jacksonville
Morris, K. A. Jacksonville
Richardson, Geo. W. Jacksonville
Richardson, Shaler Jacksonville
Royce, Clayton E. Jacksonville
Teeter, E. H. Jacksonville
Thompson, D. C. Jacksonville
Van Schaick, H. D. Jacksonville
Wilson, J. F. Jacksonville

Escambia County Medical Society

Ames, Allen M. Pensacola
Anderson, Warren E. Pensacola
Bell, John D. Pensacola
Bickerstaff, James H. Pensacola
Blackshear, T. E. Pensacola
Bryans, H. L. Pensacola
Bryans, R. L. Pensacola
D'Alemberte, C. W. Pensacola
Dodson, M. W. Munson
Fellows, J. H. Pensacola
Gachet, N. L. Century
Haisfield, A. R. Pensacola
Heinberg, Chas. J. Pensacola
Hixon, F. P. Pensacola

Hoffman, J. M. Pensacola
Holley, J. C. Milton
Lischkoff, M. A. Pensacola
McMillan, D. W. Pensacola
Mixon, J. A. Pensacola
Mock, A. E. Pensacola
Nobles, R. G. Pensacola
Nobles, V. R. Pensacola
Nobles, W. D. Pensacola
Payne, W. C. Pensacola
Pierpont, J. H. Pensacola
Quina, M. E. Pensacola
Renshaw, F. G. Pensacola
Simpson, H. L. Pensacola
Stokes, T. H. Pensacola
Sullivay, R. L. Pensacola
Thames, Rufus Milton
Turberville, J. S. Century
Turner, J. B. Bagdad
Webb, C. C. Pensacola

Hillsboro County Medical Society

Allen, Bundy Tampa
Helms, J. S. Tampa
Iobson, A. M. C. Tampa
Rowlett, W. M. Tampa
Smith, H. Mason Tampa

Jackson County Medical Society

Baltzell, N. A. Marianna
Burns, M. Q. Blountstown
Dowling, J. B. Alliance
Harrison, C. H. Cottondale
Hudgens, T. H. Sneads
McKinnon, D. A. Marianna
Miller, R. L. Graceville

Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society

Daves, F. E. Chattahoochee
Davis, Julius C. Quincy
Folmar, J. Q. Chattahoochee
Inman, J. C., Jr. Chattahoochee
Kendrick, O. G. Tallahassee
Massey, W. W. Quincy
Miles, W. G. Chattahoochee
Moor, F. C. Tallahassee
Palmer, H. E. Tallahassee
Rhodes, B. M. Tallahassee
Wilhoit, S. E. Quincy

Marion County Medical Society

Dozier, Henry C. Ocala
Freeman, Albert H. Ocala
Peek, Eugene G. Ocala

Orange County Medical Society

Edwards, G. H. Orlando
Folsom, Spencer A. Orlando
McElroy, S. Orlando
Spiers, W. H. Orlando

Palm Beach County Medical Society

Arnold, W. O. W. Palm Beach
Herpel, Frederick K. W. Palm Beach
Shackelford, C. W. W. Palm Beach
Shackelford, W. L. W. Palm Beach

Pinellas County Medical Society

Davis, W. M. St. Petersburg
Echard, T. B. St. Petersburg
Feaster, O. O. St. Petersburg
Mills, A. L. St. Petersburg
Winchester, H. E. Dunedin
Wood, Alvin J. St. Petersburg

Polk County Medical Society

Besenbruch, Peter W. Davenport
Simmons, Thos. G. Auburndale
Weed, Walter A. Lakeland

Putnam County Medical Society

Brantley, Z. Grandin
Warren, Edmund W. Palatka

St. Johns County Medical Society

Irwin, J. M. St. Augustine
Walkup, A. C. St. Augustine

Sumter County Medical Society

Wood, S. C. Leesburg

Taylor County Medical Society

Ellis, J. C. Perry

Volusia County Medical Society

Myres, M. J. Daytona Beach
Wells, J. Ralston Daytona Beach

Walton-Okaloosa County Medical Society

Huggins, E. L. Freeport
McGuire, J. J. DeFuniak Springs
Spires, Ralph B. DeFuniak Springs
Stephens, S. E. Laurel Hill
Webb, E. Porter Crestview
Williams, A. G. Lakewood

Washington-Holmes County Medical Society

Coleman, W. E. Chipley

GUEST OF HONOR

Duval, Chas. W. New Orleans, La.

VISITORS

Blachly, Lucile Spire Jacksonville
Carrington, Thos. S. Lake City
Carson, Leon Chicago, Ill.
Claxton, W. A. Melbourne
Eaton, Paul Jacksonville
Fish, Guy Indian Lake, N. Y.
Fisher, Luther C., Jr. Pensacola
Gaines, M. Toulmin Mobile, Ala.
Hamblin, A. C. Quincy
Hankins, J. N. Milton
Heath, H. O. Milton
Leeds, Harry F. New York, N. Y.
McDonald, C. W. DeFuniak Springs
McMurphy, J. P. Atmore, Ala.
Maguire, Daniel F. Pensacola
Mandes, Manuel Rio de Janeiro
Nowling, J. C. Clewiston
O'Gwynn, John C. Mobile, Ala.
Perdue, C. C. Mobile, Ala.
Pierce, J. L. Marianna
Reavis, W. F. Waycross, Ga.
Rutherford, C. L. Franklin, Ala.
Saunders, J. R. North Carolina
Smith, Rayford A. Monroeville, Ala.
Stoy, E. C. U. S. P. H. S., Jacksonville
Tucker, Beverley R. Richmond, Va.
Woolsey, R. A. St. Louis, Mo.
Young, A. A. Philadelphia, Pa.

COMPONENT SOCIETIES OF THE FLORIDA MEDICAL ASSOCIATION (1930)

PRESIDENTS AND SECRETARIES

ALACHUA COUNTY MEDICAL SOCIETY—
President—I. A. Daily Micanopy
Secretary—John E. Maines, Jr. Gainesville

BAY COUNTY MEDICAL SOCIETY—
President—W. J. Blackshear Panama City
Secretary—Don S. Fraser Panama City

BREVARD COUNTY MEDICAL SOCIETY—
President—W. C. Page Cocoa
Secretary—I. K. Hicks Melbourne

BROWARD COUNTY MEDICAL SOCIETY—
President—F. S. Skiff Ft. Lauderdale
Secretary—Ralph Lingeman Ft. Lauderdale

COLUMBIA COUNTY MEDICAL SOCIETY—
President—L. M. Anderson Lake City
Secretary—T. H. Bates Lake City

DADE COUNTY MEDICAL SOCIETY—
President—P. T. Skaggs Miami
Secretary—E. N. McKenzie Miami

DESOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY—
President—H. P. Bevis Arcadia
Secretary—H. V. Weems Sebring

DUVAL COUNTY MEDICAL SOCIETY—
President—H. Marshall Taylor Jacksonville
Secretary—Kenneth A. Morris Jacksonville

ESCAMBIA COUNTY MEDICAL SOCIETY—
President—Carol C. Webb Pensacola
Secretary—J. M. Hoffman Pensacola

HAMILTON COUNTY MEDICAL SOCIETY—
President—J. H. Corbett.....Jasper
Secretary—J. R. Bruce.....Jasper
HILLSBORO COUNTY MEDICAL SOCIETY—
President—J. Brown Farrior.....Tampa
Secretary—J. T. Cowart.....Tampa
JACKSON COUNTY MEDICAL SOCIETY—
President—W. C. Box.....Graceville
Secretary—C. H. Harrison.....Cottondale
LAKE COUNTY MEDICAL SOCIETY—
President—Chas. H. Lodor.....Eustis
Secretary—W. L. Ashton.....Umatilla
LEE COUNTY MEDICAL SOCIETY—
President—W. H. Grace.....Ft. Myers
Secretary—H. Quillian Jones.....Ft. Myers
LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY—
President—B. F. Barnes.....River Junction
Secretary—J. B. Brinson, Jr.....Monticello
MADISON COUNTY MEDICAL SOCIETY—
President—
Secretary—
MANATEE COUNTY MEDICAL SOCIETY—
President—Blake Lancaster.....Manatee
Secretary—A. Q. English.....Palmetto
MARION COUNTY MEDICAL SOCIETY—
President—R. D. Ferguson.....Ocala
Secretary—T. H. Wallis.....Ocala
MONROE COUNTY MEDICAL SOCIETY—
President—
Secretary—
ORANGE COUNTY MEDICAL SOCIETY—
President—W. H. Spiers.....Orlando
Secretary—J. R. Chappell.....Orlando
PALM BEACH COUNTY MEDICAL SOCIETY—
President—V. D. Stone.....West Palm Beach
Secretary—Gaylord Lewis.....West Palm Beach
PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY—
President—T. F. Jackson.....Dade City
Secretary—George R. Creekmore.....Brooksville
PINELLAS COUNTY MEDICAL SOCIETY—
President—H. E. Winchester.....Dunedin
Secretary—O. O. Feaster.....St. Petersburg
POLK COUNTY MEDICAL SOCIETY—
President—R. E. Wilhoyte.....Lake Wales
Secretary—Herman Watson.....Lakeland
PUTNAM COUNTY MEDICAL SOCIETY—
President—John T. Hosey.....Palatka
Secretary—E. W. Warren.....Palatka
ST. JOHNS COUNTY MEDICAL SOCIETY—
President—E. S. Estes.....St. Augustine
Secretary—A. C. Walkup.....St. Augustine
ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN COUNTY MEDICAL SOCIETY—
President—J. A. Newnham.....Stuart
Secretary—C. L. Davis.....Okeechobee
SARASOTA COUNTY MEDICAL SOCIETY—
President—T. W. Taylor.....Sarasota
Secretary—F. C. Metzger.....Sarasota
SEMINOLE COUNTY MEDICAL SOCIETY—
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JULIUS C. DAVIS, OUR PRESIDENT

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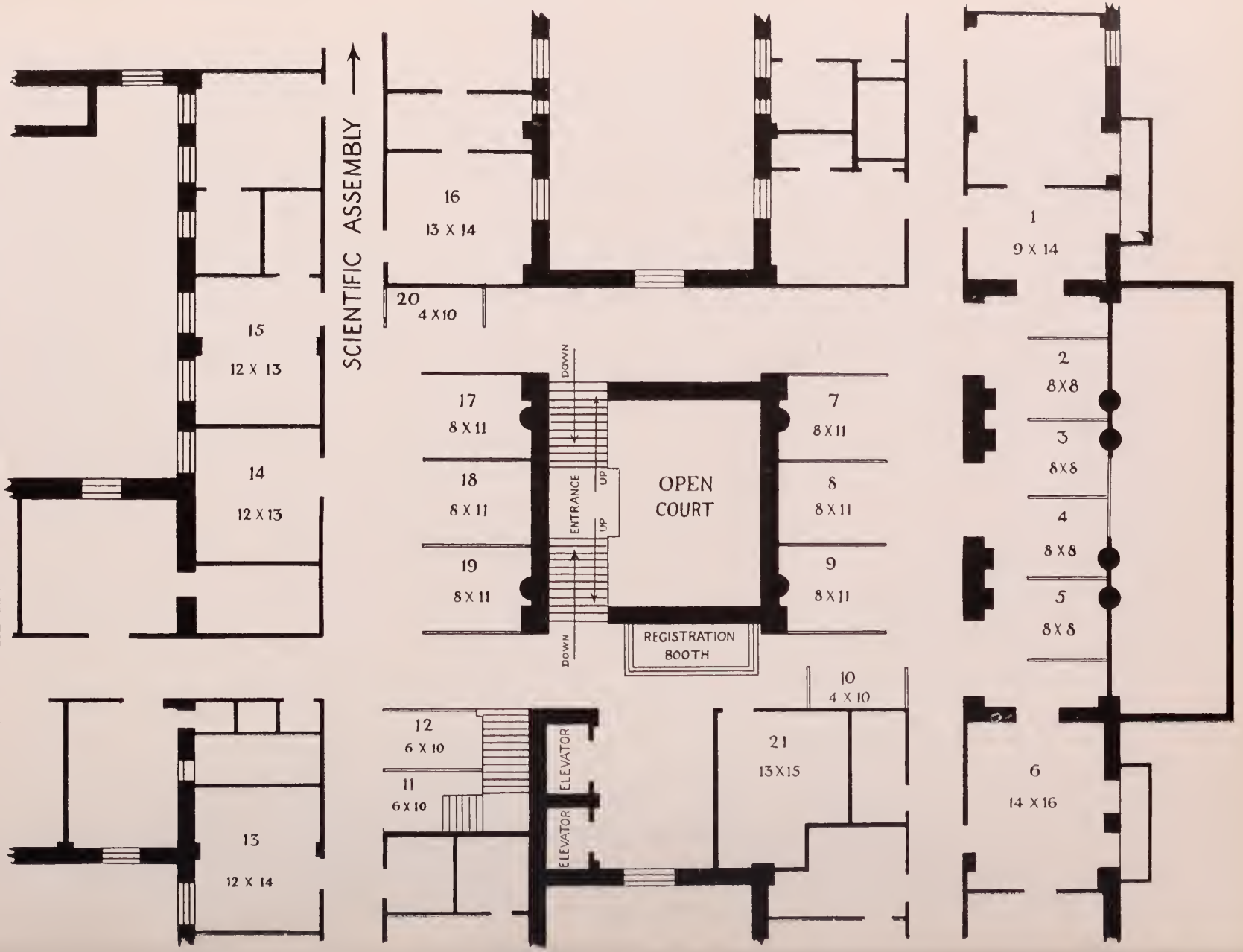
Dr. Julius C. Davis, the new president of the Florida Medical Association, was born in Clyde, North Carolina, June 27, 1886. He received his preliminary education in the public and high schools of his home town, Haywood Institute (prep. school), Carson-Newman College and Davidson College and received his M. D. degree from the Emory University School of Medicine in 1909. He practiced for two years in the rural districts of Asheville, North Carolina, then moved to Quincy in 1911, where he has since practiced his profession.

Dr. Davis has devoted much time to post-graduate work and since 1912 has spent some time each year visiting various clinics of this country. He served as second vice-president of the Florida Medical Association in 1913 and again as third vice-president in 1921. He is past vice-president of the Florida Railway Surgeons' Association, past president of the Second Dis-

SCHEDULE OF EXHIBIT SPACES AND PRICES

PENSACOLA, MAY 6, 7, 1930

SPACE	PRICE
14	$75.00
15	$75.00
16	$75.00
21	$75.00
9	$60.00
17	$60.00
18	$60.00
19	$60.00
7	$50.00
8	$50.00
10	$50.00
20	$50.00
1	$40.00
2	$40.00
3	$40.00
4	$40.00
5	$40.00
6	$40.00
11	$40.00
12	$40.00
13	$40.00



trict Medical Society, of which district he has been councilor for a number of years. He is past first vice-president of the Emory Alumni Association, past president of the Quincy Rotary club, past Worshipful Master Masonic Lodge and past Eminent Commander DeMolay Commandery.

He is now first vice-president of the Chattahoochee Valley Medical Association and local surgeon for the Seaboard Air Line Railway Company. Dr. Davis is a member of the Southern Medical Association, Fellow of the American Medical Association and Fellow of the American College of Surgeons. He organized the Gadsden County Hospital in 1920 and since that time has been the medical director of that institution.

THE PENSACOLA MEETING

The annual meeting of the Florida Medical Association held in Pensacola May 6th and 7th, was a most successful one. While the attendance was below that of last year, it was undoubtedly due to the great distance that Pensacola is from the central part of the state and the lower east coast. The scientific and entertainment programs were most excellent. The local Pensacola committee was untiring in its efforts and as a result, the details of the entertainment features were perfect. Pensacola has the distinction of having entertained the members of the Florida Medical Association on land, water and in the air. Many of the members visited the Pensacola air station and enjoyed aerial flights. We congratulate the local committee on the manner in which it handled the meeting.

STATE NEWS ITEMS

National Hospital Day was observed at St. Vincent's Hospital, Jacksonville, May 12th. During the afternoon, the hospital was thrown open for public inspection. An elaborate program was presented in the evening.

* * *

At a recent meeting of the Hillsboro County Medical Society, Drs. Donald C. Balfour and Melvin S. Henderson of the Mayo Clinic, Rochester, Minn., were honor guests and gave very interesting talks.

* * *

The next meeting of the East Coast Medical Association will be held at Melbourne October 2 and 3. Melbourne is exerting all her energies on making this an entertaining and interesting meeting. Scientific papers will be presented from a group of men distributed all along the east coast.

Recognition has been given the health program of the State Board of Health, under the leadership of Dr. Henry Hanson, state health officer. Mr. T. C. Stoy, veteran health campaign man of the federal service, has been detailed to Florida by the United States Public Health Service to assist in organizing county health units and in other promotion efforts of the State Board of Health.

* * *

Dr. J. C. McEwan of Orlando was recently called to Cooperstown, N. Y., by the illness of his mother.

* * *

Dr. and Mrs. T. Allen Jones of Holopaw announce the birth of a boy, March 20th.

* * *

LAKE COUNTY MEDICAL SOCIETY HAS AGAIN BEEN SUCCESSFUL IN REACHING THE 100% PAID GROUP OF SOCIETIES. ALL DUES FOR 1930 WERE RECEIVED BEFORE THE ANNUAL MEETING IN PENSACOLA. DR. CHARLES H. LODOR OF EUSTIS IS PRESIDENT OF THIS ORGANIZATION AND DR. W. L. ASHTON OF UMATILLA IS SECRETARY-TREASURER.

* * *

Dr. Luther W. Holloway of Jacksonville was recently elected as a member of the Board of Directors of the Children's Home Society of Florida and as chief of staff for the society's receiving home. Dr. Holloway will take the place of the late Dr. James D. Love who, for eighteen years prior to his death, was the chief of staff of physicians, surgeons, specialists and dentists for the society. Other members of the staff who will serve with Dr. Holloway are: medicine, Drs. R. H. McGinnis, T. Z. Cason, Herrman H. Harris, T. E. Buckman and Thomas Morgan; surgery, Drs. Edward Jelks, J. Knox Simpson, H. A. Peyton and James Hartman; gynecology, Dr. R. B. McIver; eye, ear, nose and throat, Drs. H. Marshall Taylor, N. M. Heggie, Shaler Richardson and William Knauer; roentgenology, Drs. L. W. Cunningham and W. M. Shaw; neurology, Dr. Ralph N. Greene; dermatology, Dr. J. L. Kirby-Smith; dentistry, Drs. Jesse L. Williams, K. W. Bulland, Chas. DePencier; and urology, Drs. Thomas Thompson and E. T. Sellers.

The American Proctologic Society will hold its thirty-first annual session at Buffalo, June 22, 23 and 24, with headquarters at the Statler Hotel.

* * *

Dr. Ralph Greene of Jacksonville addressed a recent meeting of the Eleventh District Medical Society and auxiliary held at Waycross, Ga.

* * *

Dr. R. C. Woodard of Miami has moved his offices from 203 Venetian Building to 27 N. W. 12th Avenue.

* * *

At a recent meeting of the Washington-Holmes County Medical Society, the following officers were elected: Dr. Wm. E. Coleman, Chipley, president; Dr. H. A. McClure, Chipley, secretary-treasurer.

* * *

Dr. Carl Williams of St. Petersburg was recently appointed by Governor Carlton as a member of the State Board of Medical Examiners.

* * *

Dr. S. B. Newton, formerly of Palm Beach, has moved to Blue Ridge Summit, Pennsylvania.

* * *

Dr. D. M. Adams has resumed practice in Panama City after an illness of some length.

* * *

The United States Civil Service Commission at Washington, D. C., will accept applications for Medical Officer, Associate Medical Officer, and Assistant Medical Officer until June 30, 1930. Entrance salaries for these positions in the Departmental Service, Washington, are: Associate Medical Officer, $3,200; Assistant Medical Officer, $2,600 a year. A probationary period of six months is required. Entrance salaries in the Veterans' Bureau are: Medical Officer, $3,800 a year; Associate Medical Officer, $3,200 a year. Complete information concerning the appointments are outlined in Bulletin No. 51. Apply to the United States Civil Service Commission, Washington, D. C., for blanks or information.

* * *

Dr. and Mrs. J. L. Kirby-Smith have returned to Jacksonville from a visit with Dr. Kirby-Smith's brother, Mr. Ephraim Kirby-Smith, in Tuincucu, Cuba. The many friends of Dr. Kirby-Smith will be glad to learn that he has recovered from his illness of several months and has resumed his professional duties.

Announcement was recently made of the appointment of Dr. E. Gordon Fletcher as assistant chief surgeon of the Florida East Coast Railway Company and East Coast Hospital Association at St. Augustine, reporting to Dr. Vernon A. Lockwood, chief surgeon. Dr. Fletcher comes to St. Augustine from Oakland, California.

* * *

Dr. C. H. Farmer of Lakeland is at the present time doing special work at the St. Louis Children's Hospital, St. Louis, Missouri. Dr. Farmer will remain in St. Louis until in July, when he will leave for Saluda, N. C., where he will be connected with the Infants' and Children's Hospital.

* * *

Dr. Leland Hargreaves Dame has recently moved from Homerville, Georgia, and, later, from Jacksonville, Florida, to Inverness, where he will be associated with his brother, Dr. George A. Dame, in a clinic to be established there.

* * *

Dr. T. B. Echard, who some time ago moved to Connellsville, Pa., has returned to St. Petersburg, where he has opened offices in the First National Bank Building.

* * *

Dr. and Mrs. W. W. Massey of Quincy entertained the members of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society at their regular quarterly meeting in April. An interesting scientific program was rendered which was followed by a delicious buffet lunch.

* * *

Drs. J. M. Whitfield and Don S. Fraser of Panama City are erecting a thirty-bed hospital in that city.

* * *

The American Association for the Study of Goiter will hold its annual meeting July 10 and 11th at Seattle, Washington. The Florida Medical Association is proud of being represented. Dr. John S. Helms of Tampa will present a paper at this meeting on "The Incidence of Goiter in the Southeastern States and its Possible Significance."

* * *

Dr. and Mrs. C. D. Hoffman of Orlando announce the birth of a son, April 4th.

* * *

Drs. J. M. Whitfield and Don S. Fraser of Panama City have been employed by the International Paper Company, to take care of its employees.

Dr. J. M. Whitfield of Panama City attended the Alabama State Medical Society meeting held at Montgomery, April 15-17.

* * *

The following papers were recently read at a meeting of the Pinellas County Medical Society held at the Clearwater Yacht Club, Clearwater:
"Colitis", Dr. N. L. Spengler, Tampa.
"Glanuloma Labialis in the Female", Dr. A. M. Bidwell, Tampa.

* * *

The Lions Club of St. Augustine has completed arrangements for a clinic in aid of the blind to be conducted in St. Augustine, with the aid of Dr. A. L. McLean of the Wilmer Institute, an endowed institution connected with Johns Hopkins of Baltimore. Dr. McLean will give preliminary examinations at the State School for Deaf and Blind, to be followed up by final examinations for those whose prospects for the regain of sight seem good.

* * *

Dr. F. L. Fort, orthopedic surgeon of the State Board of Health, Jacksonville, recently gave a radio address on "Bone Tuberculosis" over Station WJAX. This speech was given in the interest of the early diagnosis campaign sponsored by the Duval County Tuberculosis Association.

DR. ARTHUR W. UNDERWOOD

Dr. Arthur W. Underwood died April 1, 1930, at his home in St. Augustine, where he had been a practicing physician for many years. Dr. Underwood was born in Hubbardston, Mass., in September, 1864. He graduated from Long Island College hospital in 1891 and later served in the Lying-In Hospital of Philadelphia. Dr. Underwood practiced for some time in Lake Como, Florida, following which he was connected with the State Board of Health in the capacity of district medical officer. Dr. Underwood is survived by his wife, Mrs. Sara Brimson Underwood, and one brother in Portland, Oregon.

DR. W. A. OUGHTERSON

Dr. W. A. Oughterson of Palm Beach died about midnight, March 28th, death being attributed to cerebral embolus. The body of the physician was discovered stretched full length on the operating table in his office the following morning. He was seen, apparently in normal health, in his office the evening before, and it is believed that he felt ill and lay down on the operating table to sleep.

Dr. Oughterson was born at Bellona, N. Y., in 1875, but spent much of his life at Nashville, Tenn. A graduate of Vanderbilt University, he held the chair of medicine there for many years and practiced in Nashville for more than 20 years. In 1927, he moved to Palm Beach.

Dr. Oughterson was a Mason and a member of the American Medical Association, the Southern Medical Association, Florida Medical Association and the Palm Beach County Medical Society. He is survived by his wife, a son, T. T. Oughterson of Stuart, his mother, three sisters and two brothers who reside in New York state.

DR. WALTER PHILLIP DICKINSON

Dr. Walter Phillip Dickinson, who was born December 9, 1879, died at Oteen, N. C., February 7, 1930. He graduated from the Southern University in 1900 and received his medical degree from the University of Alabama in 1904. In 1907, Dr. Dickinson was married to Miss Laura Christian, and in 1914, they moved to Florida, locating first at Nichols, and then at Mulberry. Dr. Dickinson served in France eighteen months during the war, as captain in command of Hospital Train No. 61. On his return, he located in Lakeland, where he practiced until shortly before the time of his death. He was a member of the K. A. Fraternity and the Masonic Order. He is survived by his wife and one daughter.

The many Florida friends of Dr. C. Eugene Riggs of St. Paul, Minn., will regret to learn of his death, which occurred April 4 at his home. Dr. Riggs has been a winter visitor in Florida for a number of years, and has visited and addressed several county medical societies. He was a pioneer neurologist and for many years served as professor of nervous and mental diseases at the University of Minnesota. At the time of his death he was professor emeritus. He is survived by his daughter, Mrs. Fred Winston Long of Jacksonville.

* * *

FOR SALE—Physiotherapy Equipment in perfect condition. One Standard Junior High Frequency Machine. Original price, $600.00; sale price, $300.00. One Burdick Combination Air and Water Cooled Lamp, self-contained water cooled unit, De Luxe type. Original price, $1,200.00; sale price, $600.00. One Morse Wave Generator. Original price, $425.00; sale price, $200.00. Complete Office Equipment, including Surgical Instruments. If interested write Mrs. C. W. Love, Box 505, Lakeland, Fla.

WOMAN'S AUXILIARY

Plans for the annual meeting of the Woman's Auxiliary of the American Medical Association, to be held in Detroit, June 23-27, are rapidly nearing completion. The roof garden of the Hotel Tuller, next to the Statler, will be headquarters for all Auxiliary business. The meetings will be open to every woman attending the convention. There will be three morning business sessions, Tuesday, Wednesday and Thursday, June 24, 25, and 26. The afternoons and evenings are left free for sight-seeing and social activities, for which many plans are in the making.

Attention is called to the fact that no one may represent her state in any capacity whose state dues are not fully paid. The chairman of the Committee on Credentials and Registration is Mrs. Ledru Otway Geib, 3860 St. Clair Avenue, Detroit. All state presidents and presidents-elect are asked to time their arrival and stay in Detroit so as to be able to attend the pre-convention and post-convention Board meetings.

The following program has been arranged:

MONDAY, JUNE 23, 1930

2:30 P. M.—Meeting of the Board of Directors, Statler Hotel.

TUESDAY, JUNE 24

9:00 A. M.—Registration. Auxiliary Headquarters, Hotel Tuller.

9:30 A. M.—Business Meeting.
Invocation.
Address of Welcome.
Response.
Report of Committee of Arrangements; Announcements.
Report of Entertainment Committee.
Adoption of Convention Rules.
Minutes of Seventh Annual Meeting.
Reports of Officers and Committees.
New Business.

1:00 P. M.—Luncheon, Hotel Tuller Roof Garden.
Speakers will be announced later.

WEDNESDAY, JUNE 25

9:00 A. M.—Registration, Hotel Tuller.

10:00 A. M.—A WORKERS' CONFERENCE.
The Purpose of the Auxiliary.
The National Program.

(*Continued on page* 520)

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ATLANTA, GA.

Analysis of the Work of State Auxiliaries on the Basis of the Official Program of the National Auxiliary. Conducted by Mrs. Evarts V. DePew, assisted by all State Presidents.

Business Meeting Continued.

Election of Officers.

Adjournment, sine die.

THURSDAY, JUNE 26

Mrs. J. Newton Hunsberger presiding.

9:00 A. M.—Post Convention Board Meeting. All state presidents and presidents-elect urged to attend.

10:00 A. M.—Round Table for State Presidents and Committee Chairmen.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

of THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., published monthly at Jacksonville, Florida, for April 1, 1930.

STATE OF FLORIDA, } ss.
COUNTY OF DUVAL. }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Shaler Richardson, M.D., who, having been duly sworn according to law, deposes and says that he is the editor of the JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION, INC., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of Publisher, Florida Medical Association, Inc. Post office address, Box 81, Jacksonville, Fla.

Editor, Shaler Richardson, M.D. Post office address, Box 81, Jacksonville, Fla.

Managing Editor. None.

Business Manager, Stewart G. Thompson, D.P.H. Post office address, Box 81, Jacksonville, Fla.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Florida Medical Association, Inc. (A Corporation not for profit—no stockholders).

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

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By Shaler Richardson, Editor.

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S. G. Thompson,
(SEAL) Notary Public State of Florida at Large.
(My commission expires April 9, 1932.)

Form 3526.—Ed. 1924.

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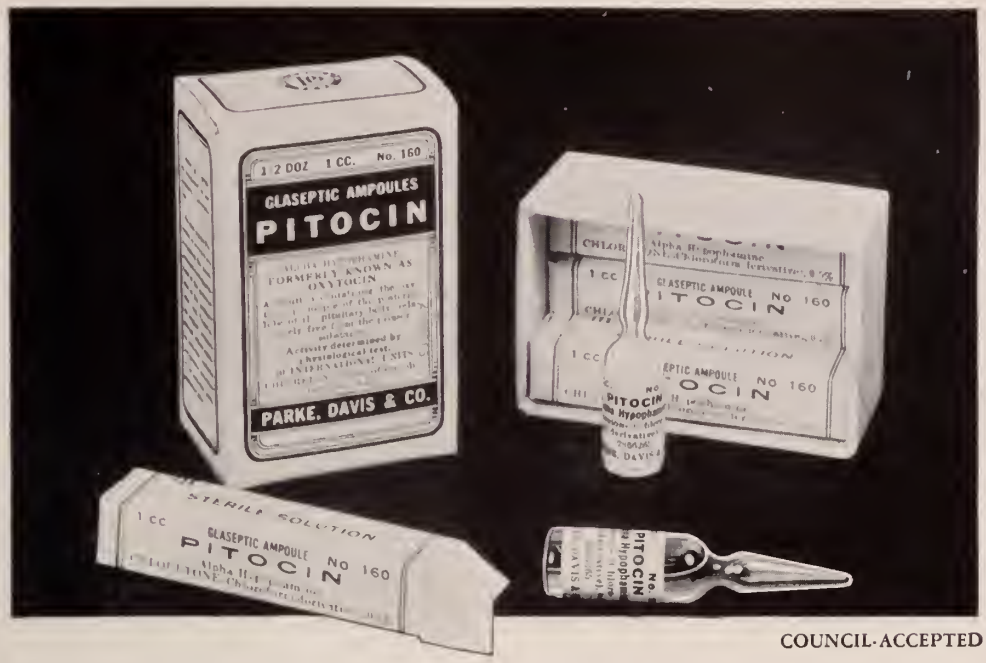
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TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS
ISSUED MONTHLY BY THE NATIONAL TUBERCULOSIS ASSOCIATION

Proposals for the treatment of tuberculosis by some form of nutritional therapy reappear periodically. Recently, the regimen devised by Gerson, based on the studies from Sauerbruch's clinic in Munich, has attracted the attention of physicians and laymen, largely through incomplete press reports of a "salt-free diet." Edgar Mayer of Saranac Lake was privileged to visit Sauerbruch and Gerson's clinic to observe their dietary methods. Upon returning to this country, Dr. Mayer and his associates, with the assistance of Frau Jungklaus who received her dietetic training in the German clinic, applied the method to a group of 30 patients. The results are reported in the Journal of the American Medical Association, December 14, 1929, from which the following abstracts are derived.

BASIC (VITAMIN) FEEDING IN TUBERCULOSIS

The diet in advanced tuberculosis should be of a caloric value sufficient to cover the metabolism (increased by the toxemia especially) as well as the atrophy induced by the disease. But the pulmonary mechanism should not be burdened by an excessive caloric intake. Fifty calories per kilogram is the optimum. Theoretically, the protein intake should be increased, but this accelerates metabolism and hence prevents pulmonary rest. On a 3,500 calory diet, a daily intake of 100 grams of protein will maintain a tuberculou patient in positive nitrogenous equilibrium.

GERSON DIET IS BASE-FORMING

Fulfilling the caloric requirement is not enough, for the wasting in tuberculosis involves a corresponding demineralization. The Gerson diet makes good this deficiency by including base-forming solids. The German physicians seem to be confused about the acid-forming and base-forming values of the dietary, but Mayer states that "an analysis of the diet reveals definitely its base-forming nature." Sodium chloride is excluded because it favors tissue hydration, which is already excessive in tuberculous processes. The most significant feature of the dietary is that

(*Continued on page* 524)

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it is rich in vitamins A to G, and this constitutes a specific advance in this particular form of dietary treatment of tuberculosis. A sample diet for one day is shown in the table.

Mayer observed in the German clinics "definite healing in advanced cases of lupus vulgaris of the face and mucous membranes that had previously been resistant to all other accepted forms of treatment. These results seemed far more striking to us than those claimed for the other forms of tu-



Rats fed on acid-forming (left) and base-forming (right) diets.

berculosis, which included tuberculosis of the bones and joints, lymph nodes, lungs, peritoneum and genito-urinary tract, both with and without sinuses." Lupus is a prevalent complication in European countries, while in the United States it is relatively rare.

DIET TESTED IN UNITED STATES

Upon returning to this country, Mayer selected 30 patients who had failed to respond to accepted therapeutic measures for two or three years. Of these, 10 were excluded before the end of the six months' period for various reasons. The 20 patients who completed the experiment showed a substantial gain in weight which it had been impossible to attain by previous procedures. Many of the alimentary disturbances, which had persisted on other diets, cleared rapidly with this regimen. The diet was well tolerated except in two instances. It was effective in diminishing fatigue and induced a sense of well-being. The slight elevation of temperature disappeared in a few cases.

Physical and roentgenological examinations of the chest showed in about one-third of the cases definite clearing, with an occasional contraction

(*Continued on page* 526)



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of a cavity. The other patients did not show any marked changes. The quantity of sputum diminished considerably in about half the cases, but in none did it become negative for tubercle bacilli. A few of the patients showed marked diminution of cough. Hemorrhages occurred in some during the experiment as well as before. Chest pains disappeared in a few who constantly complained of this symptom before. Two cases of intestinal tuberculosis which had resisted other therapeutic procedures cleared up clinically, and the roentgenological filling defects of the colon disappeared; one remained unchanged.

EXPERIMENTS ON RATS

The author cites also chemical and nutritional studies in two groups of albino rats to determine the effect of acid- and base-forming diets on the blood, bones and metabolism. Compared with the rats on the acid-forming diet, those on base-forming diets gained markedly in weight, their bones were larger, firmer and non-rachitic, their muscular tone was better, they were more vigorous, their appetite was keener, they did not succumb to infection as easily; in short, the general metabolism and well-being was superior.

Dr. Mayer realizes that his preliminary study of human patients permits of no dogmatic statement because the group was distinct from those of the German clinics, where more favorable results were observed, and because of the difficulty of clinic control; the only means being the selection of patients who failed to respond to accepted therapeutic measures for two or three years. The favorable results in about one-third of the patients studied for a period of six months of careful supervision may perhaps be attributed to the effect of the dietary. But critical clinicians may justly maintain that contributory factors other than diet were operative in the end-result. The psychic element, the enforced rest, the occasional tendency of the disease to subside spontaneously, the wholesome food, its scrupulous preparation and careful cooking, and the individual service are factors that must be considered in a final analysis.

(*Continued on page* 528)



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SAMPLE DIET FOR TUBERCULOSIS PATIENT FOR ONE DAY

3,500 calories; 70 Kg.; 1 Gm. per Kg. of body weight; basic, 40 cc.

7 a.m.		
Oatmeal	4 T	1⅔ oz.
Sugar	1 T	½ "
Cream	2 T	1 "
8 a. m.		
Br. tomatoes	1	3⅓ "
Stale bread	1 sl	1 "
Sweet butter	2 pats	⅔ "
Cream cheese	1" cube	½ "
Honey	1 T	½ "
Milk	1 C	8 "
11 a. m.		
Lemon juice	½ C	4 "
Sugar	2 T	1 "
Egg yolk	1	⅔ "
Butter	1 pat	⅓ "
Crackers	2	½ "
1 p. m.		
Veg. soup	1 C	8 "
Potato	1	5 "
Peas	Serv	3⅓ "
Carrots	Serv	3⅓ "
Lettuce	Serv	1⅔ "
Mayonnaise	1 T	½ "
Bread	1 sl	1 "
Butter	2 pats	⅔ "
Milk	1 C	8 "
4 p. m.		
Cocoa	1 C	8 "
Bread	1 sl	1 "
Butter	1 pat	⅓ "
6 p. m.		
Rice	2 T	1 "
Lettuce	Serv	1⅔ "
Cheese	1" cube	½ "
Bread	1 sl	1 "
Butter	1 pat	⅓ "
Milk	1 C	8 "
8 p. m.		
Oatmeal	4 T	1⅔ "
Sugar	1 T	½ "
Cream	2 T	1⅓ "
Almonds		⅓ "

In addition, the patient receives one tablespoon cod liver oil three times daily, much fruit between meals and about five grams of meat weekly.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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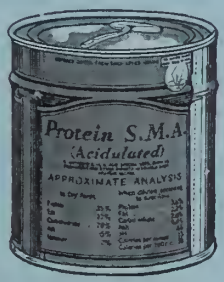
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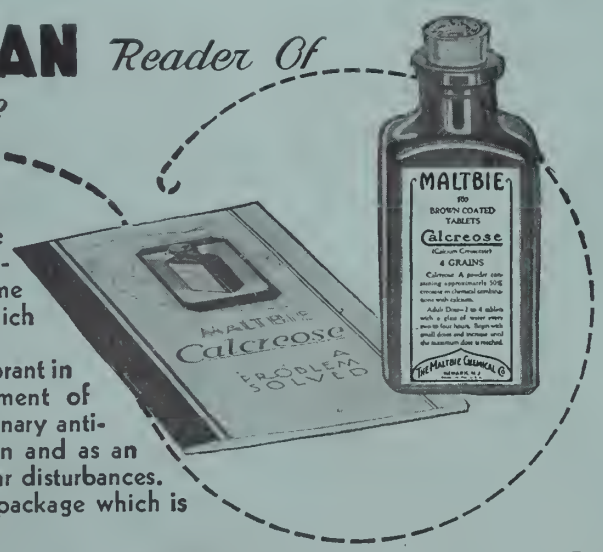
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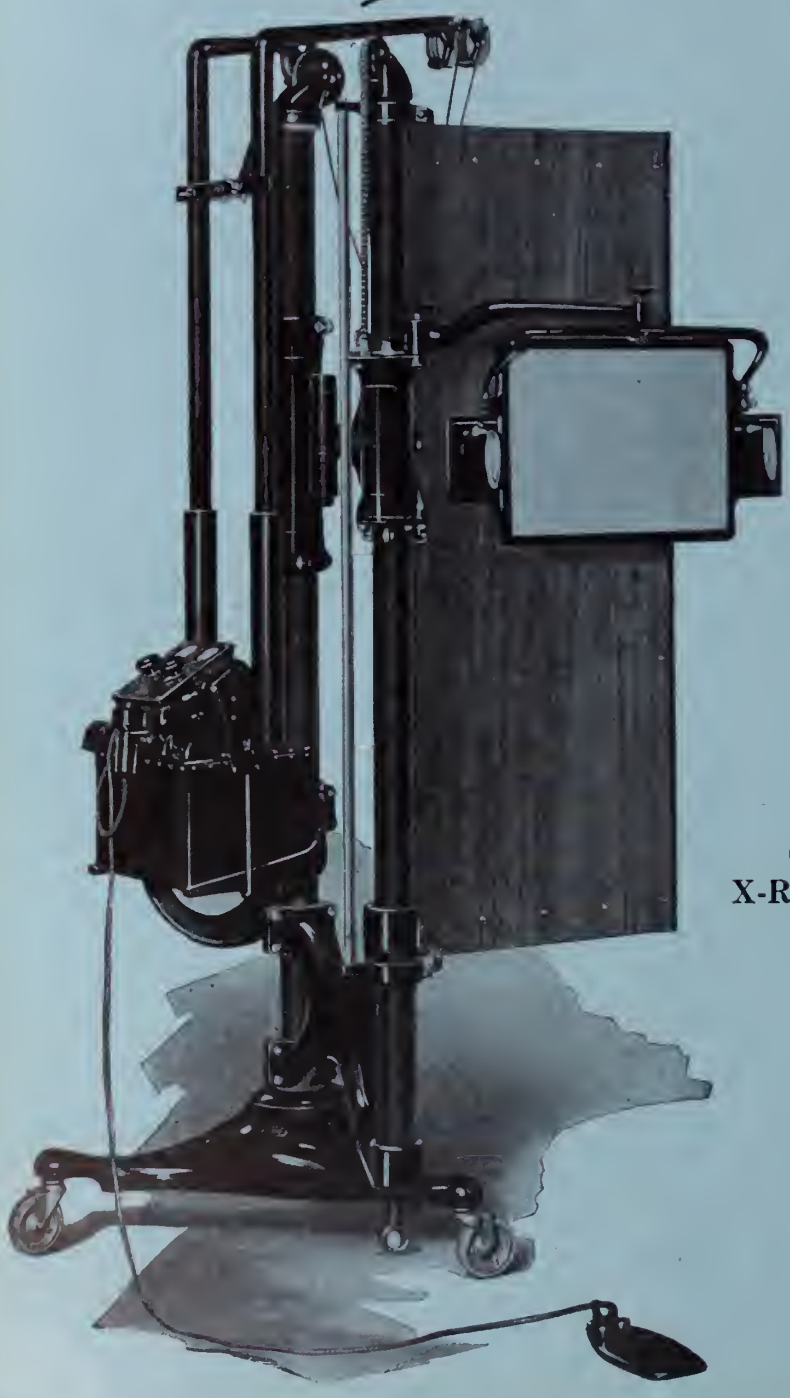
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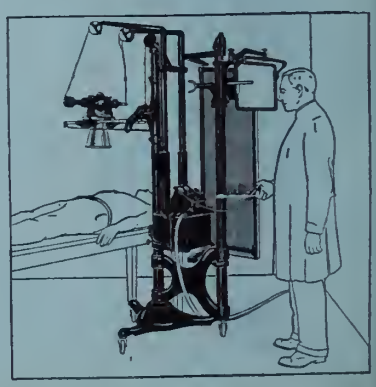
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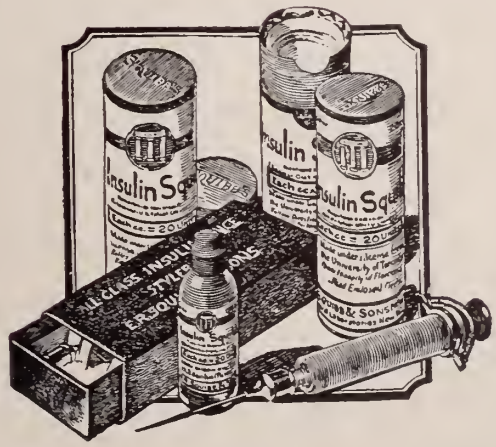
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THE CORRELATION OF THE URINARY FINDINGS AND RENAL PATHOLOGY IN EXPERIMENTAL STREPTOCOCCAL NEPHRITIS*

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The exact relationship between the renal tubular and glomerular structures and their functional activities is by no means clear in spite of much experimental research. While the presence of albumen, casts and blood in the urine is indicative of a renal lesion these abnormal constituents offer little information as to the location and nature of the changes, whether structural or functional, in the kidneys. Furthermore, the chronic forms of nephritis in man have offered the greatest difficulties in interpretation. The views regarding the sequence of the precursory anatomical changes underlying certain chronic interstitial types of nephritis have up to the present time largely been conjecture because the complexity of the functions and the lesions of the various parts of the kidney unit prevent clinically an accurate correlation of the urinary findings and renal pathological physiology.

The purpose of this paper is to report upon the results of animal experiments which were instituted in order to study the sequence and relation of the structural renal changes, and to trace the progress of their anatomical development in correlation with the abnormal urinary findings in dogs in whom nephritis had been induced with (1) living culture, (2) killed culture and (3) the filtered in vivo prepared toxic product ("Lysate") of streptococcus scarlatinae.

EXPERIMENTAL.

In view of the fact that nephritis frequently occurs spontaneously in the dog, we have used only young animals whose urine over a period of ten days to two weeks was free from albumen, casts and other abnormalities, and whose kidney function, as determined by the phenolsulphonolphthalein test, was within the normal limits. During the period of observation the animals were kept in metabolism cages to facilitate the collection of urine. Catheterized specimens were not employed so the figures in the tables for urine volumes are averages only, which were obtained by dividing the total urine volume of seven days by the number of days in the period. Daily examinations of urine were made for abnormalities over a period of from one to three weeks after the administration of the nephrotoxic substance (killed culture and "Lysate" which had been prepared in vivo from the streptococcus scarlatinae by the method of Duval and Hibbard[1]). In the case of dogs who survived several months, the urine examinations were made at weekly intervals after the first three weeks. The phenolsulphenolphthalein test for kidney function was repeatedly carried out on all dogs at approximately weekly intervals.

Fourteen young healthy dogs were employed in the experiment. The methods of inducing the nephritis were intraperitoneal and intravenous injections of "living", "killed" culture and "Lysate" of streptococcus scarlatinae. The dosage of "killed" culture was the entire 48 hour surface growth of twelve blood-agar slants suspended in 15 c.c. to 30 c.c. of normal sterile saline; while the "Lysate" dose was 15 c.c. to 50 c.c. of sterile Berkefeld "N" filtered peritoneal fluid from the immune animal that had previously received intraperitoneally the 48 hour streptococcal surface growth of 12 blood-agar slants. The dosage of "living" culture employed was the 48-hour surface growth of three blood-agar slants suspended in 10 c.c. of sterile water.

RENAL PATHOLOGY

The acute renal lesions of experimental streptococcal nephritis in the dog are characterized macroscopically by an increase in size of the kidney, by swelling of the glomeruli which project above the cut surface as dark red dots and by pinhead and smaller discrete yellowish white lineations in the cortical substance and by a sprinkling throughout the organ with minute hemorrhages. The gross appearance of the kidney of the experi-

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

mentally induced chronic interstitial nephritis in the dog is that of a normal or slightly under normal sized organ in which the consistence is increased and the color is a pale reddish brown. There are also numerous small retention cysts and cicatricial depressions scattered through the cortical substance.

The earliest histopathology is an intense engorgement of the capillaries of the glomeruli with densely packed erythrocytes that appear as though the hemoglobin has been completely dissolved out. In many of the capillary tufts the loops are enormously distended with erythrocytic thrombi. The occluded capillaries are further distended by masses of eosin-staining material which is homogenous apparently formed from the fused and destroyed red blood cells. These hyalin thrombosed capillary loops often become glued to the wall of Bowman's capsule. For some dead capillary loops, new connective tissue may partially or completely cicatricise them. In other glomeruli where the capillaries are not blocked by thrombi, the lumina contain large numbers of lymphocytic or endothelial cells, the character of which is difficult to determine since many appear to be outside of the capillaries in the capsular space. In no instance are these cells of the neutrophilic variety. We are inclined to regard them as endothelial cells because of their manner of staining and the character of the nucleus which is definitely vesicular and surrounded with considerable basic staining cytoplasm. In still other glomeruli extensive hemorrhage is noted which, in some instance, can be traced into the corresponding tubule. Sometimes the hemorrhage into Bowman's capsular space is so large as to misplace or crowd out the capillary tuft. When blood escapes into the capsular space, the red cells fuse into a homogeneous pink-staining mass which often becomes attached to Bowman's capsule. In these masses there commonly occurs connective tissue and epithelial cell invasion, producing the so-called "crescent." The fibrous tissue replacement of the hyalinized capillaries produces complete or partial glomerular sclerosis.

The tubular epithelium is not affected until quite late in the glomerular process, when it becomes swollen, granular and filled with fat droplets, especially is this so for the epithelium of the convoluted portion of the tubule. In places the epithelium desquamates and the tubule atrophies and eventually degenerates in those instances where the corresponding glomerulus is destroyed. All kinds of casts may be demonstrated. A significant feature is the absence of any acute inflammatory lesion in and about the involved tufts and tubules.

In dogs that had received several injections of streptococcal lysate, and allowed to live six months or longer, and previous urine examinations had showed the existence of an acute glomerular nephritis, the microscopic study of the kidneys reveals considerable interstitial connective tissue change of a reparatory character. In these kidneys there is noted fibrous tissue increase in the areas where the greatest damage has occurred to the glomeruli. In such connective tissue areas many of the tubules are atrophic and the glomeruli are in various stages of retrogression and some are actually necrosed. Certain convoluted tubules in the affected areas appear larger and others smaller than normal, even cystic for certain of those that are larger, due to the mechanical interference of the passage of urine caused by the contraction of the adjacent newly formed connective tissue.

The animals which receive the living culture of streptococcus showed at autopsy as the outstanding renal lesion focal and diffuse lymphocytic interstitial infiltration. The kidneys also show a moderate degree of glomerular change but no tubular. Few if any neutrophiles occur in the stromal lesion. Streptococci are demonstrable in the stained renal sections, and are recoverable in pure culture from the fresh tissue.

Correlation or Urinary Findings and Renal Disturbances.

The sequence and relation of the histological renal changes in correlation with functional disturbances as expressed by abnormal urinary constituents, has been studied from the commencement of the acute kidney lesion until chronic nephritis was well established.

The appearance of albumen and casts in the urine was a constant happening in all the injected dogs. In most cases albumen and casts occurred in 24 hours after the injection of the nephrotoxic agent, while in others these abnormalities were found only after two to three days. In addition to albumen and casts the majority of dogs showed quantities of blood and traces of bile in the urine, though usually these abnormal substances did not appear before the third day following the injection.

Four of the acute nephritic dogs were allowed to live for six months or longer. These animals

in two or three months after the third and last injection of the streptococcal nephrotoxin apparently returned to a normal renal function as indicated by the total absence of abnormal constituents in the urine. However, at autopsy there was very definite gross evidence of chronic renal changes which was confirmed by the microscopic study.

It is particularly noteworthy that the urine findings from day to day were a fairly reliable index to the anatomical changes occurring in the kidneys. Blood in the urine invariably meant glomerular hemorrhage, while fine granular casts foretold serious retrograde changes in the epithelium of the convoluted tubules which seemed to be dependent upon, but always secondary to, lesions of an obstructive character in the glomerular tufts. Here it is of interest to mention that the primary glomerular lesion followed by secondary tubular changes is the reverse picture to that in dogs induced with uranium nitrate, which according to MacNider[2] produces a primary lesion of the epithelial cells of the proximal convoluted tubules.

As early as the second day following the injection of the streptococcal nephrotoxin, the dogs passed abnormal quantities of urine which contained albumen, bile and blood. At this time there was usually a marked reduction in the elimination of phenolsulphenolphthalein which depressive period of renal function was the result of injury to the glomerular structures and not to the tubular which revealed by microscopic study of the kidneys from the animals sacrificed.

The functional changes gradually diminished in severity after a period of 3 to 4 days in dogs that received only one injection of nephrotoxin and the phenolsulphenolphthalein percentage elimination increased. These expressions of functional improvement occurred para parsu with the clearing of the glomerular injury. A second and third injection of the nephrotoxin was always followed by urine abnormalities of a much more severe character than those after a single injection. The albumen, blood and casts were markedly increased in the urine. Furthermore, these substances appeared in the urine within a few hours in dogs that previously had one or two injections of the nephrotoxin. Again, the reestablishment of normal renal function was much slower or progressively became worse until death ensued. In these animals there was more histological evidence of glomerular destruction and beginning evidence of retrograde changes for the epithelium of the convoluted tubules. The study of such kidney secretions permit of the deduction that regeneration of tubular epithelium does not occur where the corresponding glomerulus has been destroyed. This may possibly be explained on the ground that the blood supply to the tubule which is largely through the efferent branch of the glomerular tuft has become cut off by the disease process in the glomerulus.

DISCUSSION

The results of the experiment are of special interest since the renal changes were produced with a nephrotoxin that commonly causes nephritis in man. In consequence a closer analogy can be drawn to the human disease than is possible where improbably excitants of human nephritis, like uranium nitrate, have been employed.

In discussing experimental nephritis the question of allergy is to be considered in connection with its manner of production since specific lesions in the kidney have been produced with streptococcal antigen that are regarded as allergic. Birkhang[3] found allergy in a high percentage of rheumatic fever infections to the filtrate, autolysate and bacterial suspensions of various nonhemolytic streptococci, from which he concludes that there is a common allergenic factor in streptococcal products. Longcope[4] produced specific lesions in the kidney by occasioning in the previously sensitized experimental animal repeated protein intoxication. Long and Finner[5] succeeded regularly in producing glomerulonephritis by tuberculin injections into the sensitized experimental animal. Heplar and Simonds[6] report the results of their work upon the experimental production of allergic inflammation in the kidney. In all of these reported instances of experimentally induced allergic nephridides it would seem that the specific lesion has occurred only after the repeated injection of the antigenic substance or in animals in whom the hypersensitive state existed. That an allergic reaction accompanied by structural changes may occur simultaneously for the kidney and other organs as well as the skin is likely in any case where there exists a specific protein hypersensitiveness. Bacterial allergy most likely influences the clinical picture in all streptococcal nephritis of man, and particularly the post-scarlatinal form. In these cases as shown by Longcope[7] there are persisting foci of streptococci from which is absorbed a toxic product that upon reaching the already sensitized kidneys

excite new changes of an allergic nature. As regards the nephritis herein reported I do not believe that allergy could have played any part in the production since the specific renal changes regularly occurred following the first injection of antigen. To explain the nephritis on the basis of an allergic reaction it would be necessary to assume that the animals at the time of the experiment were hypersensitive to streptococcal protein. It is not likely that in these dogs such a state existed because of a previous streptococcal infection.

Constant and significant structural changes occur in the experimentally produced nephritis in dogs with streptococcus scarlatinae or its toxic product. The lesions are primarily glomerular and interstitial, depending upon the character of the material employed. For instance, the glomeruli are first affected where the toxic principle in the form of killed culture or "lysate" alone is used, regardless of whether the injection is made intravenously or intraperitoneally. While as previously reported[8] an interstitial infiltration of lymphocytes, either preceding or occurring simultaneously with glomerular lesions, occurs in the renal stroma of animals inoculated with living culture, and in which a generalized infection has developed.

The acute interstitial lesion is an infiltration of the intertubular tissues with cells of the lymphocytic variety. As a rule the neutrophiles are absent or only few in number; however, in some of the more advanced lesions they occur but are not as numerous as the lymphoid cells. Associated with the interstitial lesions are viable streptococcci which are readily demonstrable in stained sections and recoverable in pure culture from the fresh tissues.

The absence of fibroblasts or any other evidence of stromal activity in the early interstitial lesion is significant since it indicated that the lymphocytic infiltration is a true host reaction to the injurious agent and therefore not reparatory, from which it may be inferred that acute interstitial scarlatinal nephritis of man is the same kind of reaction.

On the other hand the killed culture or its toxic product produces primarily lesions of the glomerular capillaries in consequence of which the vascular loops become occluded with thrombi and later adherent to Bowman's capsule. Other glomerular tufts become enlarged through the appearance of numbers of endothelial cells in the lumen of the capillaries. Bowman's capsular spaces generally contain blood in the form of hyalin masses, also albuminous material and desquamated epithelium. Later, in those capsular spaces where hemorrhage has occurred, early proliferation ("crescent" formation) is noted. All these structural changes cause the glomeruli to undergo further and more serious alteration through replacement of the destroyed capillary loops by fibrous tissue.

While alterations in the tubular epithelium are not an early feature in either the glomerular or interstitial type of experimental streptococcal nephritis, they are affected later in the process when epithelial degeneration appears, especially for the epithelium of the convoluted portion of the tubule. Here the lining cells become swollen through the presence of fluid, granules, fat and hyalin droplets. Often the lumen is filled with blood, desquamated epithelium, granular and hyalin casts.

It seems likely that injuries to the glomeruli occasioned by the streptococcal toxic product accounts for the most, if not all, of the urinary abnormalities since albumen, bile, blood and the substances comprised in casts commonly appear simultaneously with certain structural changes that are confined to the kidney tufts. The dye elimination reveals the fact that the chlorides are normally filtered through the glomeruli and that the tubular epithelium has little or no excretory power for this salt. There is considerable evidence to show that the normal tubular epithelium is concerned mainly with the altering of the filtrate from the glomeruli through selective absorption by the lining cells. It is further to be remarked that uric acid secretion was not effected in the animals of the experiment though in all of them there was a marked glomerulo-nephritis without structural changes in the tubules. Thus it would seem that the tubular epithelium and not the tufts has to do with the concentration of glomerular filtrate, selecting out and turning back into the circulation water, chlorides, etc., since they always appear histologically normal where the glomeruli are badly injured.

Dogs with marked acute glomerulo-nephritis and no tubular changes excrete relatively little urine as compared to the normal, indicating that the function of the tubular epithelium is unimpaired. Albumen and blood, undoubtedly, have their origin in the glomerular tufts as these substances occurred only where the capillaries were injured. Combined glomerular and tubular lesions did not quantitatively affect these abnormal substances in the urine. Albuminuria and hematuria

always signified well defined alterations in the capillaries of the tufts which was confirmed by histopathological study. Casts were numerous and early in the streptococcal glomerulo-nephritis, because of the injured capillary tufts from which presumably these substances are derived, and the fact that they are aided in their formation in the lumen of the tubules through the abstraction of water by the normal tubular epithelium.

Dogs in whom there was induced an acute glomerular nephritis with the toxic product of streptococcal scarlatinae, after a period of weeks, returned to a functional normal even though the microscopic study of the kidney sections still showed the persistence of glomerular and tubular injuries, both acute and chronic. The ability of such animals to regain a normal function, under these circumstances depended apparently not upon regeneration but upon the fact that much of the renal parenchyma had escaped injury and was adequate for the carrying on of the renal function that is consistent with health. Dogs that were unable to effect a return to "functional normal" after they had shown all the clinical evidence of an acute glomerular nephritis and finally succumbed, can be interpreted as those in whom the primary effect was severe and involved too great a number of glomeruli. These dogs showed the functional expression and structural changes incident to chronic diffuse nephritis.

Summary

The results of the experiments with dogs show that the toxic product of streptococcus scarlatinae whether introduced intraperitoneally or intravenously has a selective action upon the malpighian tufts, causing commonly a hemorrhagic type of glomerulonephritis. Secondary changes of a retrograde character occur for the tubular epithelium, but more especially the epithelium of the convoluted portion which is not regenerated where the corresponding glomerular tuft is destroyed.

Four animals died in three to four days after the first injection of the "Lysate" from an acute hemorrhagic glomerulo-nephritis. The remaining 10 dogs of the series lived through the entire period of observation (one to six months); however, they were all quite sick from one to three days following each injection, as was manifested by vomiting, anorexia, fever and the abnormal urine findings.

The acute renal histopathology in all the animals corresponded to that noted for scarlatina in man, and also to the nephritis induced in the rabbit with this nephrotoxic agent which was previously reported by Duval and Hibbard.[9] The acute glomerular lesion is often multiple and varied, ranging from a simple dilatation and engorgement to hyaline thrombi formations, endothelial necrosis and hemorrhage into the capsular space. Lesions of a degenerative character occurred for the epithelium of the convoluted or proximal portion of the tubule, and are apparently dependent upon and secondary to changes in the corresponding glomerulus. Obstructive and destructive injuries to the capillary tuft seem necessary and responsible for interstitial reparatory processes which lead eventually to chronic diffuse nephritis.

The "killed" culture of streptococcus scarlatinae acted in the same manner as the "lysate" in the production of the nephritis, and regardless of whether introduced intraperitoneally or intravenously. A single large dose of the streptococcal nephrotoxin often caused a fatal acute hemorrhagic glomerulo-nephritis. Furthermore, dogs surviving the acute nephritic effect of a single dose of toxin developed chronic diffuse nephritis weeks and months afterwards. The living streptococcus induced in the dog when administered intravenously or intraperitoneally, in addition to glomerular lesions, an interstitial nephritis that is characterized by an intertubular lymphocytic infiltration.

Functional alterations occur before or simultaneously with the earliest appearance of structural changes in the kidney. Casts in the urine, particularly fine granular, are indicative of impaired glomerular function which increases as the capillary tuft injury becomes intensified.

The experimental nephritis induced in the dog with streptococcal toxic product has afforded the opportunity to trace the progress and relationship of the various anatomical changes incident thereto, and to correlate these with renal physiological disturbance expressed by abnormal substances in the urine.

Bibliography

1. Duval, C. W., and Hibbard, R. J.: Jour. Exp. Med., 1926, XLIV, 567.
2. MacNider, Wm. de B.: Jour. Exp. Med., 1921, XLIX, 387.
3. Birkhang: Jour. Infec. Dis., 1927, 40, 549.
4. Longcope, W. T.: Jour. Exp. Med., 1913, XVIII, 678.
5. Long, E. R., and Finner, L. L.: Amer. Jour. Path., 1928, IV, 571.
6. Heplar, O. E., and Simonds, J. P.: Amer. Jour. Path., 1929, V, 473.
7. Longcope, W. T.: Jour. Clin. Invest., 1927, V, 7.
8. Duval, C. W., and Hibbard, R. J.: Proceedings Soc. Exp. Biol. and Med., 1927, XXIV, 876.
9. Duval, C. W., and Hibbard, R. J.: A. M. A. Jour., 1926, 87, 898.

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CLAYTON E. ROYCE, M.D.,
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The American College of Surgeons, although admitting a lack of even approximately correct data, feel justified in assuming that few hospitals outside of the two thousand on the "Approved List" require pathological examinations or reports. There are approximately three thousand six hundred hospitals of 25 beds and over, in the United States, out of a total number of 6,852.

It may be shown that the careful gross and microscopical examination of surgical tissue has a definite value to the patient, the surgeon, the pathologist, and the hospital. Granted that he has already, or must inevitably acquire, a first hand knowledge of gross pathology superior perhaps in some respects to that of the laboratory man; unless he has co-incidentally carried on microscopical studies, he cannot readily visualize what he sees in terms of cellular pathology. In the absence of these personal studies the surgeon can but improve and strengthen his surgical judgment in the presence of pathology by forming the habit of correlating his operative observations with the detailed report of the pathologist.

To the patient a histological diagnosis is of utmost importance from the standpoint of prognosis. If the person who has suffered the removal of some part of his or her anatomy, is hospitalized again, the operative record will be in eager demand by the physician in charge, no matter what branch of the profession he may be connected with. This record cannot be entirely satisfactory unless it includes a histological diagnosis supported by descriptive data obtained by careful gross and microscopical examination.

The pathologist can measure his efficiency only by the amount of pathological material he carefully analyzes in gross and microscopical detail. More than this, he must keep in touch with normal pictures by every post-mortem opportunity.

The hospital relies on its records. The American College of Surgeons expects those records to contain a complete and detailed gross description of every pathological specimen, and a similar type of report on all tissue examined microscopically. This presupposes a description of the appearances and structural elements of the specimens, so far as is discernible with the naked eye or the microscope. The fitness of the surgical staff of the hospital is, in a degree, measured by the records of surgical tissue made in the laboratory.

In order that the laboratory examination of surgical tissue shall be most effective, a systematic routine must be carried out. To insure the best histological pictures the tissues should be placed in a preservative in the operation room as soon as removed. If seen shortly afterward by the pathologist, the gross appearance is not interfered with. When preserved in 10% formalin the pathologist may if desirable, restore the natural color by immersion for a short time in 80% ethyl alcohol. The record of the history, physical, roentgenological and other examinations should be available. The gross examination of tissues is carried on by inspection, mensuration and palpation. For the purposes of unbiased description, it is better if the specimen be regarded as an indifferent object, and considered as to its size, shape, color, and consistence using anatomical and pathological terms only as convenient to denote the relations of the various structures. The microscopical examination should take note of the structural units and their relative prevalence to each other, and to the amount normally found. Unusual cell characteristics and arrangements must be sought for. The presence of cells foreign to the part, their identity, source, numerical relationships and distribution are of necessity considered.

Repeated observations of this character can be of benefit to the observer, but if the result is but a dogmatic statement of diagnosis, much of the value of this work is lost to other interested parties. Further, a detailed routine of report can but increase the thoroughness and accuracy of the observer.

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

Records of two varieties should be made. These are descriptive and material. The former, just like the observations, should be purely objective and sufficiently detailed to warrant a diagnosis in the mind of the reader. The description of microscopical appearance should explain and supplement the record of the gross appearance.

Material records may consist of the actual specimen prepared to display the most important features and render as nearly as is consistent with permanent preservation, the appearance of the fresh material. The histological preparation, usually made as a matter of course, constitutes a practical and invaluable material record which, properly filed and cross-indexed, is available not only for check and reference, but for series study. Next in importance to material records of the kind mentioned, are photographs of the gross and microscopical preparations. For the record of the specimen in gross, photographs are economical of time, materials, and space. They supplement any descriptive effort, and are at once available for publication. Photomicrographs of selected fields emphasize important points, and may form to many a more helpful demonstration than the actual section.

In order that the report may reach the surgeon while the case is still hot, the examination must be made promptly. In the great majority of instances reports may be made within 24 hours following the receipt of the specimen. This presupposes the adoption of a suitable technique for the histological preparation.

Of the various methods available for histological preparation, choice should be made with reference to rapidity, accuracy and permanency. The freezing method can be made to answer all these requirements more satisfactorily than any other single means. A close rival is the free hand section method of Terry; using his neutralized polychrome methylene blue stain. This technique supersedes all in rapidity, gives beautiful microscopical detail, permitting study with the oil immersion lens. The stain, however, soon diffuses and fades. A generous offset to this disadvantage is the fact that the sections are so easily, rapidly and economically made that study may be made of different parts of the specimen, and any particular section may be decolorized and restained as often as desired. The main point of distinction is that the comparatively thick sections are stained on one side only and then to no greater depth than the thickness of a cell. The remainder of the section permits the passage of light so that the effect is that of viewing a section thinner than that usually obtained by any of the other methods. Accuracy is increased by the facility with which many parts of the specimen may be studied. Characteristic portions may be better selected from which to derive the sections to be filed as a record.

In the interests of accuracy too, if not for diagnosis, certainly for study of the natural history and topography of diseased tissue, mention must be made of the microscopical preparations of entire organs. Wainwright, by means of sections of the entire breast and structures removed in the radical amputation, has shown the extensiveness of breast carcinoma; the frequent involvement of both pectoral muscles and the almost constant invasion of a lymphnode; the very presence of which was previously unsuspected. Sections of this sort are made from parafine imbedding, using acetone in place of alcohol in sufficient amount to completely dissolve out all of the fat.

There seems no good reason why French's eosin-methyl azur stain should not replace the time honored hemotoxylin and eosin for routine permanent mounts. The stains are constant in value and the technique applicable with slight modification to formalin or Zenker tissue. The pictures are brilliant, the intracellular detail clear cut, and bacteria are stained perfectly.

The precise cataloging of certain tumors, particularly those of the nervous tissue, requires practice of the highly specialized technique of neuropathology and cannot be considered routine study.

The routine handling of surgical tissue requires attention to indexing the records. Where the specimens are wholly from house cases, the case number should be the laboratory number as well, and the permanent file numerical. By some one of the devices for attaching the slides to the laboratory card, the slides and cards should be filed together so that the written and the material record are available at once. Cross-indexing by organ and lesion follows as a matter of course.

In summarizing, I would emphasize that much surgical tissue is being discarded without examination, and point out the desirability of undertaking routine laboratory examinations of such tissue. The laboratory examination should be productive of a descriptive record; not merely a yes or no; an "itis" or an "oma." The material

record is essential as a matter of re-examination in the light of subsequent developments. Promptness in report is an integral factor of the value of the examination, and accuracy need not be jeopardized in securing it.

In conclusion, proper laboratory study of surgical tissue, productive of descriptive and material records, is essential to the best interests of the patient, the surgeon, the pathologist, the hospital and the profitable study of disease.

REFERENCES

Terry, Benj. T.: Journal of Laboratory and Clinical Medicine, Vol. xiii, No. 6, p. 511.

DISCUSSION

Dr. W. W. Kirk, Jacksonville:

This paper is very enlightening and interesting, and I note, as is frequent in papers of this kind, a strain of argument throughout. The pathologist very frequently has to adopt an argumentative attitude toward a number of surgeons and practitioners in his town. We always feel that if we hold out long enough we can encourage more men to investigate their cases carefully. Personally, I have never seen why a man will have his patient spend $15 to $25 on the anesthetic, and will leave out the more vital problem in the long run—that of finding out just what is finally wrong with the patient.

There are a number of ways to make this service more attractive to the surgeon, but we must realize our own limitation. The main fault very frequently is that the pathologist does not give a definite answer to the pathological findings. He will say, "This is probably cancer" or "This is a precancerous condition." The more definite we are the better will be the cooperation between the two departments.

Frequently, a rapid diagnosis, as Dr. Royce emphasizes, is essential. With the improved method of frozen section a diagnosis can be made on 90% of the specimens within thirty minutes after removal from the patient, if necessary.

I also think if a number of surgeons would become interested in the laboratory department of the hospital, and with the newer preservative methods for diagnostic study having been greatly improved (and if the specimens could be seen at the time of operation by the pathologist when convenient), that value could be obtained in all lines of work. There are so many cases in which the condition looks benign and is malignant. Very frequently we see cases where the malignant condition shows up several years afterward when it is too late to do anything of service. Probably a number of patients cannot afford this additional service, but it very frequently occurs among those who could have paid.

I would like to emphasize again the importance of Dr. Royce's paper and his elaboration on this subject. I think it is very timely.

(*Continued on page* 567)

THE SURGICAL TREATMENT OF CARCINOMA OF THE MAMMARY GLAND*

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A comprehensive dissertation upon the subject will not be attempted in this discussion. An author's prerogative of discussing those phases of a subject matter of which he has had most experience will be taken advantage of by the writer.

Digressions from the strict statement of the subject will be made only so frequently as may be necessary to lead to a clear concept as to treatment.

Due to the fact that there seems to be but little local unanimity of practice or opinion concerning the treatment of carcinoma of the mammary gland and also due to the fact that no attempt up to this time has been made to unite our efforts upon some accepted more or less standardized plan, I make no apology for making this discussion more or less academic and elementary.

Mammary gland cancer is one of the oldest of known diseases. Statistical data, although not always to be depended upon as absolutely reliable, show an enormous comparative prevalence of the disease as well as its wide distribution. Such data show a steadily increasing incidence throughout the world. My own experience comprises about 500 cases. Unfortunately, accurate records in the earlier cases have not been kept; therefore, exact statistical data cannot be given. However, I feel that my experiences as to diagnosis, methods of treatment and final results compare fairly favorably with those of the average clinic.

Due to the efforts of many beneficent agencies scientifically directed and otherwise, to educate the public upon the danger of cancer and the importance of seeking early and competent advice

*Read before the Hillsborough County Medical Society, December 3, 1929.

upon any lesion of any part of the body (the mammary gland in particular), early diagnosis and early surgical removal of pre-cancerous and cancerous lesions have increased the apparent incidence of carcinoma of the mammary gland, but on the other hand have greatly lessened the actual mortality of the disease.

Diagnosis

A few words may be said about diagnosis. A clinical diagnosis is often difficult to make. The history is important, particularly as to trauma or acute infections of the breasts. Whether or not there are any causal relations between these former conditions and the development of carcinoma is difficult to state, but quite a large percentage of cases of cancer of the mammary gland give a history of such experiences.

Given a tumor of the gland, usually accidentally discovered, which is hard, monolocular, adherent to the skin or underlying fascia, painless as a rule, the nipple retracted or directed at an angle which is at variance with the normal, with or without palpable axillary nodes, one can feel fairly well assured that one is dealing with a carcinoma. One or several of these factors may be absent and yet the case may be cancer. The positive diagnosis must finally rest upon the microscopic findings. Not only the positive diagnosis of cancer but also the kind of cancer and the grade of malignancy are determined by the competent pathologist.

The diagnosis of carcinoma must be differentiated chiefly from simple hematoma, fibro-adenoma, benign cysts of different types, particularly the blue-domed cyst of Bloodgood, chronic or acute mastitis, either diffused or monolocular, inflammatory masses of low grade infections, gumma and tuberculosis. Where differential diagnosis is difficult for any reason, a biopsy should be restorted to for a frozen section diagnosis.

It is good practice in all cases of doubtful clinical diagnosis to inform the patient and interested friends frankly of the situation and consent should be had to proceed with the radical operation under general anesthesia, immediately following a biopsy diagnosis of cancer under local anesthesia. Under no circumstance should the biopsy be done without facilities for immediate frozen section diagnosis by a competent pathologist. There should elapse no interval of time between the biopsy diagnosis and the radical operation in case of cancer. The reasons for this are obvious and of the greatest importance.

In passing I may speak of the value of transillumination of the breast as an aid in the differential diagnosis of breast lesions. Max Cutler presented this method in a recent article in which he states as his twelfth conclusion that: "Transillumination is a simple, safe, and valuable aid in the interpretation of pathological conditions in the breast and is recommended as a useful diagnostic procedure in the routine examination of this organ."

One may designate the operable cases by stating the converse. By the term operable we mean to convey the idea of radical operation where it does not involve too abnormal immediate risk to life and there exists a fair chance for cure or great prolongation of comfortable life, judgment to be made upon the clinical evidences. These clinical evidences cannot be stated either positively or negatively in accurate standardized terms in all cases, but generally speaking, cases which show evidences of lung metastases or metastases of any distant inacessible organ, cases with local progression to a degree of massive tumor formation with extensive skin involvement or massive infiltration into chest muscles with fixation, cases with massive metastases in the axilla and more distant lymphatic glands such as the supraclavicular and mediastinal glands and finally cases of long standing, which show evidences of weakness, dehydration, emaciation and generalized cachecia, should not be subjected to radical operation. It may be necessary at times to subject some of these groups to more minor surgical procedures to add to comfort by relieving them of certain disagreeable symptoms. Most cases without distant metastases and without apparent rapid progression though they may come late should be given a chance with a radical operation. A percentage of these cases may fall into one or two grade malignancy and have a chance for cure, though they be late.

A clear understanding as to what constitutes a radical operation when the term is applied to carcinoma of the mammary gland should be understood. Since the epochal work and teachings of Halstead and Willy Meyer upon the surgical treatment and the teaching of Handly's permeation theory of the spread of carcinoma of the mammary gland, there have been no changes except as to minor details of technique. It is a curious fact that both Halstead and Meyer simultaneously devised their original operations and

changed minor details of their original technique, which made their operations both less formidable and less dangerous. The radical operation for cancer of the breast has been fairly well standardized by Halstead and Willy Meyer's work. It must always consist as a minimum of such incisions as will permit the removal of an amount of skin sufficiently distant from the lesion to insure as nearly as possible removal of all invaded skin. This will depend upon the type of cancer and its degree of progression and does not mean in the average case that skin grafting will have to be resorted to. The skin incision should give ample room for the complete removal of the pectoralis major and minor muscles, all fat and lymphatic glands from the axillary space, the entire breast and the upper border of the anterior sheath of the rectus muscle.

Anatomical Considerations

There are certain anatomical considerations involved in the operation which make for completeness in so far as the greatest assurance against metastases and for final cure as also for safety from immediate danger in the operation as well as for conservation of function of the arm and forearm.

The most important anatomical consideration as regards recurrence either local or metastatic is the distribution of the lymphatic system involved in carrying cancer cells to the immediate and remote environs. Generally speaking the lymphatic vessels and glands in this region are distributed along the fascial planes. Monrad claims that they never penetrate the muscles. This opinion was based upon experiments carried out by injection of methylene blue solution into the breasts of one hundred infants up to two and one-half years of age. The lymphatic channels are the first routes for dissemination of cancer cells from the breasts. In order to get a clear conception of the lymphatic system connected with the breast so that the fundamental principles of the radical operation may be understood; it may be stated that there are three sets of lymphatic vessels which may carry cancer cells to the environmental groups of lymph nodes.

The axillary trunks are the chief channels for such dissemination. They are two in number and pass from the outer, upper and under segments of the breast along the outer border of the pectoralis major muscle to the axillary nodes.

The intermuscular trunks which drain the under surface of the breast pass through the pectoral fascia, over and through the pectoralis major muscle and lead to nodes between the pectoralis major and minor muscles and the subscapularis group of glands.

The intercostal lymphatic vessels pass from the inner and outer segments of the breast through the pectoralis major and intercostal muscles to the sternal nodes lying behind the sternum in the parasternal line. These vessels may also carry metastases to the opposite axilla.

The axillary groups of lymph nodes into which the first two sets of lymphatic vessels drain may be divided into three groups. The pectoral group lies between the pectoralis major and the serratus anticus muscle receiving drainage from the breast and chest wall.

The humeral group lies along the axillary vessels; the highest of these, the subclavian, lies behind the costocoracoid membrane, Mohrenheim's space. The lymph vessels of the arm drain into this group. Their vessels anastomose with the other two groups.

The subscapular group lies along the subscapular vessels and on the posterior wall of the axilla.

Generalization of the disease spread takes place after metastasis has reached the axillary nodes and muscular aponeurosis.

Other anatomical considerations make for the immediate safety of the operation and preservation of function of the arm, forearm and shoulder of the side affected.

The axillary space contains the most important structures aside from the breast itself to be removed. It also contains the most important structures to be preserved from a safety and functional standpoint. This space may be said to be bounded regionally; in front by the skin, superficial fascia and fat with connective tissue network, the pectoralis major and minor muscles; behind by the latissimus dorsi, teres major and minor and subscapularis muscles; inner side by the chest wall, ribs, serratus anticus and intercostal muscles; above by the coracobrachialis, long head of the biceps and the deltoid muscles. Along the upper border of the pectoralis major between this muscle and the deltoid lies the cephalic vein. The brachial plexus, the axillary vein and artery traverse the space in an oblique direction just below the coracobrachialis muscle. The course of the long thoracic and the long subscapularis nerves runs across the posterior wall of the axillary space in a longitudinal direction.

Technique

The basic principle of the technique of the radical operation is the dissection and removal en bloc of the glands, fat and fascia of the axilla, the pectoralis major and minor muscles, the entire breast and sufficient amount of skin.

The incision may be made to suit the individual case depending upon size, location and other factors connected with the tumor mass. There are many types of skin incisions devised by as many different surgeons. My own preference for the average case is the ellipse beginning at about the middle of the deltoid above and extending the incision downwards over the pectoralis muscle in the direction of its fibres, the inner and outer lines of the incision pass about three or more inches from the summit of the tumor mass on each side. The incision finally extends over the upper border of the rectus muscle.

The inner skin flap is now undercut upwardly and inwardly over the lower border of the deltoid, below the clavicle and along the margin of the sternum. The outer skin flap should be undercut to the outer border of the latissimus dorsi muscle, which is now exposed up to the coracobrachialis muscle which passes between the humeral attachments of the latissimus dorsi and the pectoralis major. The cephalic vein which marks the dividing line between the deltoid and the pectoralis muscles should now be identified and exposed for about two or three inches along the upper pectoralis major border. This vein should be carefully protected from injury in case of injury to the axillary vein. The outer border of the pectoralis major should now be exposed and the index finger of the left hand may now be passed underneath this muscle to the point of its division from the deltoid marked by the cephalic vein. The muscle is separated from its humeral attachment, being divided close to the bone. It is then turned downward and the axillary vein lying below the coracobrachialis muscle is exposed in part. The outer border of the pectoralis minor is now exposed and the finger passed underneath and the muscle separated from its attachment to the corocoid process and divided through its fibrous attachment. The acromiothoracic vessels may be injured in separating and dividing the pectoralis minor muscle unless care is exercised.

The axillary vein is now completely exposed. The axillary artery lies behind, the brachial plexus lies behind and below this vein. By sharp dissection along the lower border of the axillary vein the fatty tissue with lymph nodes are dissected downward in one piece. Care should be taken to preserve intact the long subscapularis or thoraco-dorsal nerve and vessels and the long thoracic nerve. The long subscapularis nerve supplies the latissimus dorsi muscle, while the long thoracic supplies the serratus anticus muscle. It is sometimes called the respiratory nerve of Bell. The latissimus dorsi, the teres major and teres minor and the subscapularis muscles are now exposed in the posterior wall of the axilla and the space has been cleared of all fatty and fascial tissue and lymph nodes, the axillary vein and artery and the axillary plexus are uncovered and freely exposed.

The mass of axillary fat, the pectoralis major and minor muscles and the breast are now to be removed en masse. This is best done by directing the dissection from behind by pulling the combined mass towards the midline placing the line of cleavage on tension. In this way the perforating branches of the internal mammary artery are approached from below and are more easily controlled, lessening hemorrhage.

After thorough hemostasis has been carefully carried out, the skin flaps, which should have been undercut in such a way as to leave only enough underlying fat to insure proper circulation, should be brought together with a few properly placed tension sutures with the necessary approximation skin sutures or skin clips. A short drainage tube of pure soft para rubber should be placed through a stab wound at the most dependent part of the wound near the axilla. A snugly fitting, gently compressing dressing should be applied, leaving the arm free to be moved early. The drain should be removed in about ten to twelve days.

Much has been said about the choice of dessecting instruments in these cases. Individual opinions seem to be divided as to whether the knife, cautery or the high frequency acusector should be used. It would appear that the cautery or acusector should be the instruments of choice at least in the more advanced cases. This opinion is based upon the theory of the autogenous transplantation of cancer cells during the operation where agents that are not destructive to cancer cells are used in dissection. The cautery is probably the instrument of choice, at least until the acusector is so perfected that the muscular contractions attending its use may be obviated. Hemorrhage is lessened by the use of the cautery.

Anesthesia

Nitrous oxide with oxygen may be considered the anesthetic of choice for this operation. It must be remembered that ethylene is to be avoided when the use of either cautery or acusector is contemplated. Sodium iso amylethyl barbiturate may be used intravenously, provided respiration anesthesia for any reason is contraindicated.

The preoperative preparations and post-operative treatment do not differ from those carried out in cases of major surgery in general.

It should be borne in mind that the technique should be carried out with the greatest consideration for asepsis and hemostasis. Shock usually ensues only in cases of undue loss of blood and prolongation of the operative time.

Since the operation is more or less formidable and involves a large amount of dissection, care should be taken to assure one's self that the subject is not a diabetic. Diabetics do not endure radical breast amputations well unless the blood sugar is carefully kept within normal limits.

The immediate operative mortality should be less than one per cent. We have had no operative mortality in our series.

Prognosis as to cure after radical operation is dependent upon several factors. The early primary cases where the disease has not spread from its primary focus are the most favorable. The grade of malignancy is probably the greatest factor as respects final cure other factors being equal in comparative cases.

If we are to make progress in the treatment of mammary gland cancer, accurate records must be kept in which all facts are accurately recorded. Pathological findings must be recorded in all cases. The pathological reports should include a record of efforts at grading the malignancy. The type of treatment employed, whether radical operation or incomplete operation, should be stated. If radiation or other form of treatment with or without operation, radical or incomplete is used, exact statements concerning same should be recorded. A five-year follow-up should be made in all cases that survive this period.

The final end results expected from treatment may best be given by quoting the summary of a report recently made to the American College of Surgeons by its committee on the treatment of malignant disease. This report is as follows:

1. The study of 536 cases of cancer of the breast from 9 different hospitals in 1918, 1919, and 1920, recorded and classified in a uniform manner on a minimum five-year end-result basis and supported by pathological evidence of the diagnosis of cancer, yields the following results:

2. Twenty per cent of all cases entering the hospital are alive and well at the end of five years after treatment.

3. Twenty-five per cent of all primary cases are alive and well at the end of five years.

4. Twenty-eight per cent of the "operable" cases are alive and well at the end of five years.

5. The early favorable cases without axillary involvment give 57 per cent of successful results.

6. The more advanced cases with axillary glands involved gave only 16 per cent of successful results.

7. The "operable" cases, with remote metastases, are all dead.

8. Of the cases entering the hospital with recurrence after operation only 3 per cent are alive and well.

9. No successful results were obtained without operative treatment.

10. In primary cases the best results (29 per cent) were obtained by the standard radical operation, with or without prophylactic X-ray.

11. In primary cases incomplete operation with or without X-ray gave only 10 per cent success.

12. In primary cases X-ray alone gave no success.

13. The results of the standard radical operation with removal of both pectoral muscles (34 per cent) were superior to those in which the pectoralis minor was not removed (26 per cent).

14. The addition of pre-operative or post-operative prophylactic X-ray treatment to the radical operation gave no greater proportion of five-year successful results.

15. Prophylactic X-ray did not prolong life in the unsuccessful cases.

16. Prophylactic X-ray did not diminish the incidence of local recurrence in the field of operation in unsuccessful cases.

17. There is no evidence in this series of cases to support the contention that prophylactic X-ray is of value as a supplement to operation in cases of cancer of the breast.

18. The value of X-ray in the treatment of recurrence after operation is established.

19. Three patients are alive and well over five years as a result of X-ray treatment of recurrence. In one of these excision of the recurrence was performed, in addition to X-ray treatment,

but in no case was the recurrence proved by pathological examination.

20. Patients with recurrence treated by X-ray lived longer than those in which X-ray treatment was not given.

21. The most marked benefit from X-ray treatment was obtained in the cases of local recurrence in the field of operation or in the axillary region.

22. Advanced cases with remote metastases were little benefited by X-ray treatment.

A COMPARATIVE STUDY OF PROPHYLAXIS AND THERAPY OF THE ACUTE INFECTIONS OF FLORIDA CHILDREN*

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The pediatrician and family physician constitute the first line of defense in the control of communicable diseases. They have a legal obligation to report and a moral obligation to teach.

Regulations from health authorities tend toward simplification, investigation being substituted for police power, a thorough cleaning replacing terminal fumigation and "air tight" domestic quarantine. The doctor should meet these advances open-minded, without prejudice, avoiding uninformed criticism.

It is the general practitioner who can help so effectively to reduce the morbidity and mortality rates of the communicable diseases, by instructing the average intelligent individual of today, who respects his doctor's opinion over all others. The physician should be more aggressive in urging immunization, active and passive, against these infections.

Clinical infection is the result of the overcoming of the bodily defenses by invading pathogenic organisms; it is quantitative as well as qualitative; the amount as well as the degree of virulence of the invader is a determinant as well as the degree of resistance or immunity of the invaded.

An organism's virulence depends on the quantity of toxin it produces, and upon its ability to multiply and to penetrate the body's defenses. Most bacteria have a special affinity for cells of certain parts of the body, and produce their characteristic disease only when they reach and multiply in such a focus. Thus the meningococcus, dwelling in the masopharynx, produces serious illness only when it penetrates to the meninges. But streptococci and tubercle bacilli proliferate in any part of the body.

The number may increase faster than the specific defenses can kill them, yet the body can form substances that neutralize the toxin, so that a "carrier condition" results.

Exotoxins or true toxins, extracellular and soluble, are the toxins secreted or excreted by the organism, e. g., the toxins of diphtheria or of tetanus.

Endotoxins, the toxic products of most organisms, are obtained by extraction or by disintegration of the cell.

Immunity is a specific resistance dependent upon the presence of certain ferments in the body fluids, and upon the ability of certain cells to ingest and destroy invading organisms (phagocytosis); it is dependent upon the non-specific as well as the specific opsonins in the blood. Opsonins are substances in the blood which prepare a bacterium for phagocytosis.

These specific substances are mainly concerned in immunity. General "resistance" or "good health" has never proven a reliable defense against specific infections, but doubtless favors recovery, particularly in the common infectious diseases of childhood.

Specific immune substances are either antitoxic or else antibacterial. The relationship between the exotoxins and their antitoxins is very different from that of the endotoxins and the substances which neutralize them. Antitoxins combine with the corresponding toxins in a multiple scale; one part of serum neutralizes one part of toxin, one hundred parts approximately one hundred parts.

Not so the endotoxins; the amount of serum must increase much more rapidly than the amount of filtrate and at a certain point neutralization becomes impossible no matter how much serum is added.

The immune substances of the body are grouped and spoken of as antibodies, and, except for the antitoxins and perhaps the precipitins, are mostly antibacterial. Besides those mentioned they include the agglutinins, the opsonins and the bacteriolysins; the agglutinins clump bacteria, the opsonins prepare them for phagocytosis, and the bacteriolysins cause their dissolution—like a process of digestion. These are all for the most part specific for the homologous antigen or antibody

*Read before the 57th Annual Meeting of the Florida Medical Association, Pensacola, May 6, 7, 1930.

producer, although they exhibit their properties in a lessened degree for closely allied species, e. g., the injection of killed typhoid organisms will produce not only agglutinins for the typhoid bacillus but also in smaller amounts for the paratyphoid bacilli A. and B.

An antigen is an antibody producer. Inject a protein and it will stimulate that animal body to produce antibodies to that protein, if the dose employed is not big enough to cause death. Thus the injection of diphtheria toxin stimulates the body to form antitoxin and typhoid bacilli to form typhoid bodies. Owing to the difficulty in determining a dosage that would cause a clinical infection, killed bacteria rather than living ones are chosen. Due to contact with antigens in doses so small as to produce only subclinical infections, people are acquiring immunity "naturally." Such contact increases the amount of non-specific and group antibodies.

Resistance, immunity and susceptibility are only relative, not absolute.

Immunity is natural and acquired. Natural is that inherent in the species or race. Racial immunity, however, is less marked in humans than in lower animals; a relative immunity is noticed in those races exposed to a disease for generations, e. g., tuberculosis and measles. But the high mortality in these two may have been due to unintelligent care. This natural immunity is inherent in everyone. If specific, it is passive and effective, and dependent upon the antibodies elaborated by the mother. Non-specific natural immunity is effective against only small doses of less virulent organisms, forming the base for acquired specific immunity with or without symptoms. This acquired, natural immunity is active; that is, the cells of the individual's own body elaborate the immune substances—are active in their production. Active may endure for years or a lifetime, in contrast to passive immunity which lasts only for weeks or months. An attack of a disease or of a closely allied or modified disease (cowpox, smallpox), producing an active immunity, has been recognized since the time of Jenner. Immunity may be acquired artificially, passively (diphtheria antitoxin to contacts) and is immediate, or actively (diphtheria toxin-antitoxin) and is slow and more permanent.

Thus comes the physician's chance to reduce mortality by advocating only those practical prophylactics backed by controlled experience. Even if there is still doubt as to the exact value of a vaccine or antitoxin he might be unwarranted in refusing to use it, if no harm can result in its use. Yet he would not be justified in recommending whooping cough vaccine as a routine as compared to smallpox vaccination or toxin-antitoxin. It is essential too that his technique be brought up to date, e. g., the multiple pressure method of vaccination. These preventives should be given in early infancy for many reasons. He must not forget that it is during the first few years of life that diphtheria is most deadly. In spite of the early use of adequate doses of antitoxin, the fact remains that one-sixth to one-fifth of the children who contract diphtheria before they are five years old, die of it. So select sixth to ninth month for prophylaxis.

There is good reason for believing that dosage of infection is an important factor in determining the severity of the primary disease; this is particularly true of measles. Exposed only once and at some distance, a child will usually have but a mild attack or escape clinical infection; but one exposed repeatedly to massive doses at short distances will have a severe or malignant infection. Therefore isolation of the sick should be insisted upon even though exposure has already taken place; such isolation is the duty of the attending physician regardless of any law or further measure taken by the health department to protect others outside the family.

Reporting to the Board of Health is necessary, not that they put up a placard alone, which is time honored, respectable, impresses the laity, and is a gesture in response to the demand that the Board of Health "do something;" but there are better reasons for requiring reports, and they may not involve restricting or advertising the affected family at all. The tracing of the sources of infection as well as those possibly infected, is more important than even the strictest "quarantine." Vaccination, prophylactic antitoxin, convalescent serum, vaccines, warning parents of possible dangers, and advancing our knowledge, should be the common functions: the pediatrist and general practitioner to observe and record, the Health Officer to collect, analyze and interpret the tabulated figures. Observations collected from varied sources are not so one-sided; e. g., infectious diseases are more fatal among the poor than among the rich, owing to earlier age, less favorable environment and less prompt and intelligent care.

Therefore, let the physician report for the report's sake, and not be too urgent that the health department "do something about it."

The Treatment of the Acute Infectious Diseases of Children

1. Chickenpox.

Prevention or control by differentiation of clinical symptoms from those of varioloid by history, age, absence of invasion period, the slight constitutional symptoms, eruption seen most over covered surfaces, macules quickly becoming vesicles; lesions varying in size, superficial with little or no infiltration, vesicles unilocular, collapse and do not become umbilicated; lesions seen in crops, in all stages at the same time, lasting only two to four days, terminating in soft, friable crusts; not influenced by smallpox vaccination.

Exclusion of patient from school until primary scabs have dropped off, or at least twelve days from onset; prevention of contact with non-immune persons.

Prophylactic inoculations and vaccination done early are justifiable only in institutions; better to allow healthy children to take varicella, as it is most inconvenient when adult life is reached.

Immunity can be obtained by intravenous injection of contents of vesicles.

Quarantine—none. Disinfection of soiled articles and thorough cleaning. Lotions: Lotio alba, calamine lotion, carbol. vaseline.

2. Diphtheria.

1. *Preventive Methods of Control of the Infected Individual and His Surroundings.*

(a) Recognition of the disease by clinical symptoms and bacteriological examination from follicular tonsillitis, Vincent's angina, spasmodic croup, scarlet fever and syphilis.

(b) Isolation: Until two successive negative cultures are obtained from nose and throat 24 or more hours apart. Terminated if persistent diphtheria bacilli prove avirulent, or 16 days after onset, with fair safety.

(c) Immunization: Exposed susceptibles, i. e., those found non-immune by the Schick test (those giving a positive reaction) should be at once immunized by antitoxin unless cultured and kept under daily observation by doctor or nurse.

(d) Quarantine: All exposed persons until shown by bacteriological examination not to be carriers.

(e) Disinfection of all contact articles and those soiled by discharges. Air, sun, renovation of sick room.

2. *General Measures.*

(a) Pasteurization of milk supply.

(b) Application of Shick test to all especially exposed persons, such as nurses and physicians and active immunization of all susceptibles, but not within 3 weeks after the administration of antitoxin.

(c) Active immunization with toxin-antitoxin or toxoid of all children by end of first year without prior Schick testing, and of school children with or without prior use of Schick test.

(d) Determine presence or absence of carriers among contacts, and, so far as practicable, in the community at large.

Treatment. Specific.

Even if only clinically suggestive, give one sufficiently large dose of antitoxin immediately without waiting for a bacteriological diagnosis.

UNITS OF ANTITOXIN REQUIRED.
(Park of Willard Parker Hospital)

	Mild Cases	Moderate		
	Subcutaneous	Intramuscular	Severe	Malignant
			Intravenous	
Infants, 10-30 pounds	2,000	3,000	6,000	8,000
(under 2 years of age)	3,000	5,000	10,000	10,000
Children 30-90 pounds	3,000	4,000	10,000	15,000
(under 15 years of age)	4,000	10,000	15,000	20,000
Adults, 90 lbs. and over	3,000	5,000	15,000	20,000
	5,000	10,000	20,000	30,000

When given intravenously, as low as one-half the amounts stated may be used. Cases active and seen later than second day, laryngeal cases, and those complicating the exanthemata, treat as severe. Subcutaneous method may be used for prophylactic and mild cases; intramuscular in gluteal region is better for moderate and moderately severe cases, because simple absorption is rapid, and little risk of anaphylactic shock. In extremely severe or malignant cases where immediate neutralization of the toxin is imperative, use the intravenous method by fontanel, external jugular or median basilic vein, first testing with 0.1 c.c. intravenously; if negative give slowly; if positive shock, give intramuscularly. In older child or adult with history of asthma or previous injections, test with 0.1 c.c. subcutaneous. If severe reaction, give 0.1 c.c. every 15 minutes for 5 doses for desensitization; then 0.1 c.c. intravenously, and if no reaction give whole dose; if symptoms of shock, continue small intravenous doses until desensitized. For the few shock cases use 5 to 10 milliliters of a 1-1000 dilution of adrenalin.

Local Treatment. Ice-collar. Gentle hot soda bicarb. solution irrigation from fountain syringe with rounded glass tip, if patient does not fight it.

General Treatment. Symtomatic: Ventilation, 68° F. moist air by kettle, if laryngeal. Absolute rest in bed with low pillow. Cardiac stimulants of strychnia and caffein. Morph. sulph. 1/48 to 1/8 gr. Enteroclysis of saline sol. for shock and collapse.

Complicating. Paralysis may require gavage feedings, artificial respiration for transient paralysis, proper position in bed and strychnia.

Diet. Nourishing food of high calories, much liquids, medicine dropper, Breck feeder, small amount often, gavage or rectal feedings.

Intubation if retraction of episternal notch and of the supraclavicular space, and pulse disappearing with inspiration; do not wait for exhaustion and cyanosis. Benzoin inhalations. Thick cereals, ice cream fed with head low.

Tracheotomy under local anesthesia if intubation fails.

Nursing. Give nurse 1000 units, if her immunity is doubtful; mild throat spray, face mask, wash hands often and apply alcohol.

Convalescence guarded for at least 21 days. Diet, sun, iron, cod liver oil. To rid throat of persistent organisms local applications are disappointing; Roentgen ray or tonsillectomy, even if culture is positive.

Better to protect children with toxin-antitoxin or toxoid than to take chances on proper treatment with antitoxin, because:

1. Antitoxin may be given too late or in insufficient amount.
2. Laryngeal type may cause asphyxia before medical attendance is called.
3. Nasal diphtheria may be regarded as a cold until it is too late.
4. Sacrifice of school or work and possible bad after-effects (heart).
5. Others suffer inconvenience from quarantine.

Toxoid is toxin treated with iodin or formaline instead of with antitoxin. Advantages over toxin antitoxin are

(a) no serum to cause anaphylaxis

(b) only two doses necessary.

3. Epidemic Encephalitis

Reportable and quarantine maintained; contact children excluded.

Treatment symptomatic.

Auto and convalescent serum intraspinally and intravenously recommended by some, but too early to demonstrate their value. Convalescence —Prolonged mental and physical rest.

4. Erysipelas

Prophylaxis. Vaccines have been used without benefit. Cleanliness and aseptic precautions in the newborn and isolation are important. Early blood transfusion.

Medicinal. No specific internal remedy. Ichthyol, painted over the affected area in a 25% solution, or one part ichthyol to three parts of lanolin or collodion, is one of the many topical applications.

Magnesium sulphate, ice compresses, hot boracic acid packs, ultra violet rays have their advocates.

Serum Therapy. Hemolytic streptococci, like their near relatives, the scarlatinal streptococci, produce a toxin, and for this a concentrated erysipelas streptococcus antitoxin of therapeutic value has been obtained. It is recommended to fight the toxemia, but does not prevent recurrence. Put up in 10 c.c. syringes with sterile needle. Dose 10 to 20 c.c. or more.

Of special value in the treatment of facial erysipelas.

No definite opinion about use of convalescent serum; not enough cases.

5. Erythema Infectiosum or Roseola Infantum

Treatment is symptomatic. The disease is important only in reference to diagnosis from the acute exanthemata, such as German measles, measles and scarlet fever. Also drug, toxic and intestinal rashes are differentiated by the duration, location and course of the eruption.

6. German Measles

Preventive treatment or control by early diagnosis, from history, mildness of symptoms, character of rash, enlarged cervical, occipital and other glands, so constantly seen; differentiated from measles, scarlet fever, antitoxin, drug, and reflex skin rashes from indigestion.

Isolation. Separation from non-immunes and exclusion from school and public places during infectivity. Communicable and reportable.

Immunization—none. Quarantine—excluded from school and public gatherings for 2 weeks. Disinfection of mouth, nose, and throat discharges and articles soiled. Terminal airing and cleaning.

Reason for attempting control is that it may be confused with scarlet fever.

7. Glandular Fever

Preventive control by early diagnosis and isolation by recognition of (1) swelling of the lymphnodes and pronounced fever without obvious cause, (2) the disproportion between the degree of cervical adenitis and the catarrhal symptoms, (3) the increase of the mononuclear leukocytes in the blood, (4) the characteristic position of the head, (5) the mild course, (6) and its usual occurrence in children or young adults.

Medical treatment is entirely symptomatic.

8. Influenza

Prophylactic Treatment.

Not easy to recognize by clinical symptoms only, except during epidemics when contact infection should be avoided; children should be kept away then from the coughing and sneezing in public places such as movies, street cars and stores; all health and food habits should be carefully checked up to increase the individual resistance.

Discharges from mouth and nose of infected persons, and freshly soiled articles should be disinfected. The avoidance of kissing and the use of articles in common; scrubbing hands before eating, excluding visitors from isolated towns and institutions, the closing of Sunday and day schools, face masks, treating dishes and utensils with hot soapsuds, airing and cleaning, the isolation of early and suspicious cases of upper respiratory infections, rest in bed from the beginning of an attack, and not to return to school or work without a thorough physical examination—all these are the general measures advisable during epidemics of influenza.

To prevent, there are no drugs of special value. Hexamethylenamin, 3 to 5 grains, well diluted, 3 or 4 times a day may have some prophylactic value. Quinin and oil of eucalyptol have been recommended.

The use of prophylactic vaccines, such as influenza combined (influenza bacillus of Pfeiffer, micrococcus catarrhalic, pneumococcus, streptococcus hemolytic and nonhemolytic) coming in four 1 c.c. bulbs or syringes, or in 5 or 20 c.c. vials; or influenza-pneumonia prophylactic, dispensed three bulbs in package (one complete course) or in 20 c.c. vials—these have been tried and are still extensively used. Apparently there is little scientific basis for including the Pfeiffer bacillus, since the case for it and for the Dialister pneumosintes has not yet been proved. Same comments as applied to secondary invaders and infections in colds.

General treatment of symptoms is by sponging, ice-caps, antipyrin, phenacetin, acetylsalicylic acid, sodium salicylate, bromide, Dover's powder, hot normal saline solution nasal douching, oil sprays, argyrol, neosilvol, cold compresses or ice bag to throat for cough, steam inhalations with benzoin, phenol and glycerine or incision for middle ear, symptomatic treatment of bronchitis, pneumonia or gastro-intestinal diseases. Finally tonics of iron, strychnin, malt, cod liver oil, nourishing food, much sleep and rest, pure air and heliotherapy.

Vaccine or Serum Treatment.

Influenza being primarily an intoxication it is unreasonable to suppose that injections of killed bacteria would produce any antitoxic immunity, and they undoubtedly do not.

The use of serum from convalescents not necessary, except in severe cases with pulmonary involvement; is experimental.

9. Malaria

Preventive treatment or control of

1. The infected individual and his environment by

(a) Recognition of the disease—clinical symptoms, always to be confirmed by blood examination, repeated if necessary.

(b) Screen patient from mosquitoes, until blood is free from malarial parasites by persistent treatment with quinine.

(c) Immunization—none. Prophylactic doses of quinine to those exposed to Anopheles.

(d) Quarantine—none.

(e) Disinfection—none. Destruction of Anopheles in the sick room.

2. General Measures.

(a) Destroy larvæ by eradicating breeding places of mosquitoes.

(b) Blood examination of persons living in infected centers.

(c) Screening sleeping and living quarters; use of mosquito nets.

(d) Killing mosquitoes in living quarters.

Medicinal

Bisulphate more soluble and more readily absorbed than sulphate of quinin. Given in syrups. Tannate and euquinin are tasteless and effective in children. Single large dose 3 to 10 grains 4 to 6 hours before expected paroxysm, or in sweating stage, or small doses at frequent intervals day and night, gradually increasing the intervals.

Under 2 yrs., 1 grain every 3 hrs.

Three to five yrs., 2 grains every 3 hrs.

Six to ten yrs., 3 grains every 3 hrs.

10. Measles.

Preventive treatment or control by

(a) Early recognition of catarrhal symptoms, Koplik spots, valley temperature chart, location and appearance of rash 10-14 days after exposure; differentiating from scarlet fever, German measles, influenza, skin diseases, antitoxin and drug rashes.

(b) Isolation—During catarrhal symptoms, until all abnormal secretions from mucous membranes have ceased—minimum of nine days—four before and five after appearance of rash being period of greatest communicability.

(c) Immunization by 5-10 c.c. of serum or 20-30 c.c. of whole blood of convalescent measles patients, or of healthy adults who have had measles; attack usually averted if given within 5 days after exposure, or, at least, modified. Given later prior to clinical symptoms, severity modified and permanent immunity conferred. Of great value in institutional outbreaks.

(d) Quarantine—Exposed susceptible school children and teachers excluded from school and public gatherings—14 days, household.

(e) Disinfection of articles soiled with secretions from nose and throat. Air, sunshine, thorough cleaning.

Active immunization by inoculation of the virus of measles taken from nasal mucous discharge of patients, one to two days before appearance of eruption, mixed with normal saline solution. A few drops applied to nasal mucous membranes of healthy infants of 4-5 mos., relatively immune from mothers gives a reaction of slight fever, and a few spots on face and body in 8 to 16 days. No unfavorable symptoms and several years of immunity conferred.

Measles toxin from so-called streptococcus morbilli injected into horses and rabbits produced an antitoxin concentrated several times as high in neutralizing power as the convalescent serum.

Immune goat serum, as prophylactic, inoculated four days after exposure, protected 97%. Valuable in young and delicate children and in hospitals and institutional epidemics, since it is available in greater quantities.

Treatment of Complications.

Symptomatically. Acute bronchitis with steam inhalations and expectorants, like ammonium chloride and epecac. Broncho-pneumonia, treated as usual.

11. Meningitis, Cerebrospinal.

Preventive Methods of Control of

1. The infected individual and his environment by

(a) Recognition of the disease by clinical symptoms, microscopic and bacteriological examination of the spinal fluid and of nasal and pharnygeal secretions.

(b) Isolation until 14 days after onset.

(c) Immunization by vaccines still experimental.

(d) Quarantine, none.

(e) Disinfection of discharges from nose and mouth and of soiled articles. Cleaning.

2. General Measures.

(a) Search for carriers among families and associates of recognized cases by bacteriological examination of posterior nares of all contacts.

(b) Education as to personal cleanliness and need of avoiding contacts.

(c) Prevention of overcrowding in living quarters, transportation conveyances, public assembly and working places, and inadequately ventilated closed quarters in barracks, camps and ships and among military units.

3. Epidemic Measures.

(a) Increase ventilation, separation of exposed persons, and minimize their bodily fatigue and strain.

(b) Quarantine carriers until nasal and pharyngeal secretions prove free from meningococci.

Clinical results of drugs disappointing, even hexamin; symptomatic only. Avoid bronchopneumonia by good nursing.

Specific Serum Therapy.

In epidemic cerebro-spinal meningitis, or meningococcus meningitis, the antimeningococcus serum has reduced the mortality and physical damage. Indicated even before bacteriologic diagnosis. Give this polyvalent serum subdurally early, in amount smaller than amount withdrawn by lumbar puncture. Inject slowly under gravity pressure, not by syringe. If severe or obstinate, inject into ventricles to avoid hydrocephalus. Cisterna magna route not dangerous, more effective, and easier to enter. Intravenous injection of value theoretically only in early stages, when you are practically dealing with a severe general septicemia. Large quantities of serum (200-600 c.c.) are given intravenously. Isolate and cultivate organism, so if patient fails to respond, another lot may have a higher antibody content; otherwise secure another lot from another laboratory. The amount injected intraspinally is from 5 to 10 c.c. less than amount withdrawn, which latter is allowed to flow until it issues at 4 to 5 drops a minute. In children under five years 20 c.c. is probably the maximum.

In moderate cases repeat daily for four days until a decided remission of symptoms, or until organisms and pus cells disappear.

In severe cases, repeat every 12 hours. Continue spinal drainage after stopping injections,

until the pyrexia is ended and the spinal fluid is clear microscopically.

12. Mumps.

Prophylactic Treatment or Control by:

Early diagnosis from adenitis by the history, size, shape, position, "feel" of swollen parotid gland, and inflammation of Stenson's duct.

Isolation and exclusion from school and public places.

Immunization, none. But Hess protected exposed children by drawing blood from median vein from donors recovering, from some entirely recovered, and from some who had mumps several years before; not one came down with mumps, although other children in same ward did.

Quarantine, none. Exposed, regularly inspected.

Disinfection — All articles soiled with discharges from nose and throat.

13. Poliomyelitis.

Prevention and Control by:

(a) Early recognition by clinical symptoms, assisted by chemical and microscopical examination of the spinal fluid.

(b) Isolation for three weeks.

(c) Immunization, none.

(d) Quarantine of exposed children and adults who might contact children and food handlers for 14 days.

(e) Disinfection, nose throat and bowel discharges and soiled articles. Cleaning.

General Measures During Epidemics.

(a) Search for and examine all sick children.

(b) Isolate all children with fever pending diagnosis.

(c) Education in bedside technic to prevent distribution of infectious discharges.

Acute Stage—Absolute rest in bed, casts, sand or salt bags, anodynes (codein, antipyrin, allonal, amytal), alcohol for bed sores; lumbar puncture has been advised with replacement of some spinal fluid with 2 c.c. of a 1-1000 solution of adrenalin every 6 hours from the beginning, overcomes edema and other inflammatory processes—not verified by later investigation.

Convalescence—From 4 to 6 weeks from onset. If tenderness is gone use massage, heat, electricity, and muscle training.

Serum Therapy.

In infantile paralysis, cause is not isolated; but disease can be transferred to monkeys, who can be immunized by vaccination; not practical yet for children. Laboratory and clinical experience show that convalescent serum has neutralizing properties for the virus; it inhibits or cures, given in sufficient amounts early, particularly if withdrawn recently.

Dose is arbitrary; custom is to inject 15 to 20 c.c. intraspinally, and about twice that intravenously.

Rosenow's antistreptococcus serum and other serums have been found by some investigators to have little or no protective or neutralizing action on the virus. The biological houses dispense a 10-c.c. syringe container of poliomyelitis antistreptococcic serum from the blood of horses immunized against the toxins and highly virulent cultures of streptococci isolated from polio cases; refined and concentrated; "offered with the recognition that the cause of the disease and the value of the serum are still unsettled."

14. Rabies.

General Control Measures.

Muzzling of all dogs allowed to go at large.

Detention and examination of dogs suspected.

No delay in antirabic treatment of persons bitten by dogs or by other animals, known or suspected of having rabies.

Where rabies is prevalent, rigid quarantine, and yearly immunization of dogs. But dogs so vaccinated are not always resistant to street virus. One single dose is contents of 5 c.c. vial.

Local treatment.

Clean wound, produce bleeding, cauterize with fuming nitric acid, drop by drop, within 24 hours. If bone, cartilage, or bloodless tissue, use pure carbolic acid instead.

Prophylactic Treatment for Humans.

Pasteur treatment is indicated:

1. For bites from animals proved rabid by dumb or furious symptoms, or by the microscope (Negri bodies found in biting animal's brain); animal inoculations with infected brain material is slower method.

2. When hands or face are contaminated with saliva of a rabid animal without being bitten (possible cracks, hangnails or open wounds).

3. For bites from stray dogs which cannot be located, precautionary.

4. For bites by animals with suspicious actions, or when rabies infection cannot be ruled out.

Results of Pasteur Treatment:

Immunity is usually conferred, if wound is not on face. Lacerated bites of hands or face require intensive treatment.

Rabies Vaccine (Cumming).

A full adult treatment consists of daily injections of 21 syringes of 2 c.c. each (3 pkgs.) or

A 21-dose treatment is delivered in three installments at intervals of four days.

A 14-dose treatment, delivered in two installments at intervals of four days is sufficient for slight exposure remote from the brain, a superficial bite or abrasion through the clothing, or on the lower extremities.

Children under 4 require only 1 c.c. doses. Phone air mail order to nearest biological branch or equipped hospital.

15. Rheumatic Fever, Acute.

Prophylaxis—Avoid exposure to cold and dampness in poorly ventilated insanitary environment. But outdoor exercise, fresh air and sun are warranted.

Tonsillectomy and adenoidectomy, best done between attacks, undoubtedly removes possible portals of entry. A complete operation may not insure freedom from subsequent attacks, but the general condition and resistance are greatly improved.

General Treatment—Prolonged rest in a comfortable bed reduces blood pressure, lowers the pulse rate, lessens the danger of heart complications, and gives relief to joint and muscle pain by making immobilization possible. Heat, gentle rubbing with oils containing salicylates, wrapping in cotton, sponging the sweating body with alcohol, flannel pajamas, liberal typhoid diet, including meat, acids, milk, cereals, eggs, fruits, fruit juices, lemonade, alkaline mineral waters—all add much comfort to the little patient. Giving medicine with the food is bad psychology.

Salicylic acid and its derivatives are considered by many as specific; relieve pain, reduce fever, allay joint inflammation and possibly shorten attack. Avoid overdoses and salicylic acid; sodium salicylate is most generally used; 30 to 60 grains a day in divided doses to a child of five. Give after feeding rather than before. An alkali (soda bicarbonate) given in twice the dose of the salicylates prevents gastric irritation. Aspirin and novaspirin are well borne by young children; tolysin has the advantage of being tasteless and more easily administered.

For intense pain, temporarily, morphine, codein or allonal.

Great care and rest during prolonged convalescence, against cardiac complications and relapses.

Anemia, so common, is best treated with carbonate or citrate of iron combined with 1/200 gr. of arsenious acid or two drops of Fowler's solution. Liver is of great value.

Vaccines and Sera. Problem not definitely solved. Small and Birkhaug's publication on a particular coccus, toxin, and immune serum, not convincing. Not certain that "Streptococcus cardioarthritidis" is the cause of rheumatic fever. We must suspend judgment.

16. Scarlet Fever.

Treatment.

Prevention or Control by:

(a) Early diagnosis made from Schultz-Charlton skin blanching test, history of exposure, vomiting, angina, sudden temperature, tachycardia, strawberry tongue, erythematous rash on chest, etc., 2-7 days after exposure; differentiated from measles, rubella, diphtheria (tonsillar exudate) tonsillitis, septicemia, erythema scarlatiniform, urticaria, and drug eruptions.

(b) Isolation for 28 days from onset, regardless of desquamation, until cessation of all abnormal discharges carrying streptococcus scarlatinae from nose, throat, ears, abscesses, or wounds. Daily medical inspection of exposed school children.

(c) Immunization. Exposed susceptibles demonstrated by Dick test, analogous to technic of Schick test, may be actively immunized by injecting the diluted toxin into triceps three successive weeks. Immunity conferred for over eighteen months. Passive immunity by injecting scarlet fever antitoxin very temporary, occasionally severe anaphylaxis; not advised because of reaction, greater future susceptibility to serum sickness, and because only about 10% of exposed persons develop scarlet fever.

(d) Quarantine. Exclusion of exposed children and teachers from school, and food handlers from work, for seven days. Stress contagion of children with acute catarrhal symptoms.

(e) Disinfection of all contact or soiled articles, and pasteurization of possibly contaminated milk or milk products. Airing, cleaning and sun.

Treatment of Complications.

Adenitis. Ice bag for resolution or warm poultices to hasten suppuration. Not too early incision, except in severe cellulitis.

Ears. Hot douches of two quarts 4% boric acid solution every 2 or 3 hours, followed by drying and instillation of phenol and glycerine. Incise early for bulging. Keep canal clean, dry, and sterile with gauze ear-wicks. Watch for mastoiditis. Nephritis treated as usual.

Specific Treatment.

Scarlet fever streptococcus antitoxin. One sufficiently large early therapeutic dose is essential. Second or third, only if toxic symptoms recur. Intramuscular injections satisfactory, but if cases are severe use intravenous route in reduced dosage.

Give usually a desensitizing, subcutaneous injection of 0.2 to 0.4 c.c. about two hours before therapeutic dose—always if intravenous; 3000 units ordinarily enough; may be reduced for very young. For very toxic cases initial dose may be 6000 to 8000 units, part intramuscularly and part intravenously.

Some feel that owing to serum reaction, this antitoxin should be used only for severe septic types, one large dose, as repetition seems to have no effect.

Distribution. Therapeutic packages from commercial houses contain 3000 units varying from 10 to 20 c.c., depending upon antitoxic potency (one test dose of toxin).

Passive immunization of persons susceptible by Dick intracutaneous test, if so desired, can be done from 1500 unit (5 to 10 c.c.) packages; may be obtained from State Laboratory on special request.

17. Septic Sore Throat.

To control the infected patient and his surroundings.

Recognize the disease by the explosive nature of the outbreak and by finding cases patronizing a certain milk dealer, restaurant or ice cream parlor. The extreme swelling and soreness of glands and throat, prostration, recurrence after temperature drops, differentiate it from ordinary tonsillitis. Laparotomy reveals a peritonitis but with appendix intact. If rash is severe, scarlet fever is suspected, but blanching test is negative, no strawberry tongue, and the rash appears on the third or fourth day. Bacteriological examination of the streptococcus (hemolytic type).

Isolation during the sickness and convalescense, and exclusion from handling milk or milk products.

Immunization, none. Quarantine, none.

Disinfection of articles soiled with discharges from the nose and throat of patient. Cleaning.

General Measures. Forbidding public sale or use of milk until pateurized. Exclusion of the milk of infected cow is possible based on bacteriological examination of the milk of each cow, and preferably from each quarter of the udder. Exclusion of carriers, pasteurization, and avoidance of common towel, drinking and eating utensils. Aspirin, phenacetin, methenamin, allonal, amytal, local irrigations of normal saline, spraying with weak solutions of argyrol or gentian violet, steam benzoin inhalations, and ice bag or collar are among the things used for relief of the distressing symptoms.

If diphtheria is suspected lose no time in using antitoxin.

18. Smallpox.

Prophylactic Treatment or Control by:

(a) Recognition from the clinical symptoms. Immunity tests may prove useful.

(b) Isolation. In screened hospital wards, vermin free, until infectivity is over.

(c) Immunization by multiple pressure method of vaccination. Keep vaccine cold and fresh for maximum takes.

(d) Quarantine. Isolation of contacts until vaccination with virus of full potency. Daily medical observation of all recently vaccinated contacts until height of reaction is passed, if vaccinated within 24 hours of first exposure, otherwise for 16 days from last exposure.

(e) Disinfection of all articles by boiling or other effective disinfectant; thorough cleaning and disinfection of premises.

(f) General vaccination in infancy, again on entering school, and of all persons if variola appears in severe form.

Vaccination.

Multiple pressure method of vaccinating by tangential pricking of cleansed but not irritated skin, 30 times in 5 seconds, through a drop of smallpox vaccine, covering area not greater than one-eighth inch; needle point crosswise of the area, should be lifted free and above the skin. At once wipe off the remaining virus with sterile gauze. No dressing.

19. Tetanus.

1. Preventive Methods of Control.

The infected individual and his environment.

(a) Recognition of the disease—clinical symptoms; tetanus baccillus may be confirmed bacteriologically.

(b) Isolation, none.

(c) Immunization, by at least one, and preferably two, injections of antitoxin.

(c) Quarantine, none.

(d) Disinfection, none.

2. General Measures:

(a) Obstetrical supervision.

(b) Education propaganda such as "safety-first" campaign, and "safe and sane Fourth of July" campaign.

(c) Prophylactic tetanus antitoxin where wounds are ragged or penetrating or are acquired where soil is contaminated.

(d) Clean foreign matter and slough from all wounds early.

(e) Supervision of biological products, especially vaccines and sera.

Prophylactic antitoxin 1,500 units subcutaneous, as near the wound, or the main nerve trunk leading from the wound, as is practicable.

For children, 40 units per pound of body weight dose within 7-10 days.

Treatment by Antitoxin:

Dosage recommended by the New York City Department of Health:

Day	Intraspinally	Intravenously	Subcutaneously
First	5,000 to 10,000	10,000	
Second	5,000 to 10,000		
Third	5,000 to 10,000		
Fourth	5,000		5,000 to 10,000

Computing adult dose of 10,000 units as equivalent to 70 units per pound of body weight, the following table is the corresponding dosage for a child of 50 pounds:

Day	Intraspinally	Intravenously	Subcutaneously
First	3,500	3,500	
Second	3,500		
Third	2,000		
Fourth			3,500

Drugs. Sedatives most useful.

For a two-year-old, 7 to 10 grs. of potassium bromide well diluted, every 2 hours; 2 to 3 grs. of chloral every hour.

Luminal has recently been advocated. Adult dose 3 to 5 grains by mouth or rectum.

Chloretone controls muscular twitchings, and seems safe. Adult dose 30 to 60 grains in weak alcohol by mouth, or in hot olive oil by rectum.

British War Commission decided against magnesium sulphate. May be tried if antitoxin cannot be obtained promptly. Dose 1 c.c. of a 25% solution for every 25 lbs. of body weight, given intraspinally. Carbolic acid no longer used. Control spasms by inhalation of chloroform. Morphine sulphate to quiet patient.

20. Typhoid Fever.

Preventive Methods of Control:

1. The infected individual and his environment by

(a) Recognition of the disease, clinical symptoms, confirmed by specific agglutination test and bacteriological examination of blood, bowel discharges, or urine.

(b) Isolation. In fly-proof room at hospital, if inadequate sanitary and nursing care at home. Release by two successive negative cultures of stools and urines at least 24 hours apart.

(c) Immunization, of susceptibles who have been or may be exposed.

(d) Quarantine, none.

(e) Disinfection of all bowel or urinary discharges, and soiled articles. Cleaning.

2. General Measures:

Pure and protected water, pasteurized milk, supervised food and food handlers, avoiding carriers, prevention of fly breeding, sanitary disposal of human excreta, vaccination where typhoid is prevalent, systematic examination of feces from contact carriers, vaccination of travelers who do not show strongly positive Widal reaction, exclusion of suspected milk, pending discovery of contamination, and of water, unless disinfected by hypochlorite or by boiling.

Medical Treatment. Not specific but symptomatic. Liberal typhoid diet of soups, cereals, eggs, meat, milk toast without crusts, desserts and all liquids. The child gets all he wants or digests, to secure contentment and gain in weight.

Little new about typhoid vaccine, and no specific serum for therapy. "Triple Vaccine" (including the two types of paratyphoid infection) is of U. S. Army and Navy standard. In immunizing adults, best given in divided doses, giving 0.2, 0.5, 1 and 1 c.c. at weekly intervals. Children do not react so severely as adults; does not interfere with school or play. Dose for children based on body weight. Average adult weighs 150 pounds; a 50 pound child would receive one-third the adult dose.

Both bacterial vaccines, typhoid and typhoid-paratyphoid, come in three bulbs (one course), three syringes (one course), ten 2.5 c.c. bulbs (hospital package), and 20 c.c. vial.

Some biological houses make Typhoid Phylacogen and claim that "its early use usually shortens the course of the disease, renders the symptoms milder, and reduces the incidence of disturbing and dangerous complications."

21. Upper Respiratory Infections (Common Colds).

General Treatment, (see influenza).

Biological control not rational, because theoretically, etiological specific micro-organisms unknown. Yet, clinically, combined vaccines may produce a specific immunity for the strain injected, are harmless, and are worth further trial or study.

22. Whooping Cough.

Preventive Treatment or Control by:

(a) Recognition of clinical symptoms of a cold and a cough with spasmodic expirations, gradually becoming paroxysmal with crowing inspirations, and glairy mucus, worse at night; lungs usually negative, increase in leucocytes or rather lymphocytes, history of exposure or epidemic; failure of medical treatment and antispasmodics; confirmation by bacteriological examination of bronchial secretions even one week before characteristic whoop. Pertussis bacillus of Bordet and Gengou, Hemophilus pertussis.

(b) Isolation. Separation of patient from susceptible children and exclusion from school and public places for the period of presumed infectivity, which is catarrhal stage (7-14 days), continuing certainly for three weeks after characteristic whoop appears.

(c) Immunization. Vaccine injected subcutaneously early, in sufficient dose, 7% contracted pertussis instead of the usual 60% of exposed. For a year-old infant two thousand million the first dose, four thousand million the second dose and six thousand million the third dose, two or three days apart.

(d) Quarantine. Limited to the exclusion of non-immune children from school and public gatherings for 10 days after their last exposure.

(e) Disinfection of nose and throat discharges and articles soiled by discharges. Cleaning, sun and air.

(f) Education in dangers of catarrhal symptoms with cough.

Therapeutic Injections. Same technic and dosage as in prophylactic, four to six injections, the last two being eight thousand million and sixteen thousand million; the earlier given, the quicker the improvement in the number, severity and duration of the attacks.

In the prophylactic and curative treatment of the acute infectious diseases of childhood, the number of drugs, vaccines and serums used is many; the list of infections for which to find prevention, alleviation, or cure is long. For some we rest on firm ground with specific and reliable agents; for others we have slight theoretical and clinical evidence, and still for others little or no justification, for their use. To differentiate these, necessitates theory, practice and experimental data.

Indebtedness is hereby acknowledged to:

Dr. Henry L. Shaw, "Infectious Diseases of Infancy and Childhood."

Edward S. Godfrey, Jr., "Introduction to Infancy and Childhood."

Dr. Benjamin White's "Critical Review of Vaccine and Serum Therapy."

Committee on Standard Regulations for the Control of Communicable Diseases of the American Public Health Association.

The U. S. Public Health Service.

New York State Department of Health.

(From the above I have quoted freely).

To Kolmer and to Thomas and Evy for facts on immunology.

"Recent Advances in Diseases of Children," Pearson and Wyllie, London Abt's Pediatrics, 1928, 1929.

Fantus' "Gen'l Therapeutics," 1928, 1929.

"Handbook of Therapy," Osborne and Fishbein, 1928, A. M. A.

"Treatment of Disease in Infants and Children," Kleinschmidt, Germany.

Catalogs of various drug houses.

"The Principles of Sanitation," C. H. Kibbey.

Resume

Chickenpox: Prophylactic inoculations and vaccinations justified only in institutions. Intravenous injection of contents of vesicles immunizes. Bed in eruptive stage, urine examination, alkaline washes and lotions, fingernail restraint to avoid scars on face.

Diphtheria: Exposed non-immunes (to Schick test) to have one or two thousand units of antitoxin, unless cultured and daily observed. Quarantined until two successive negative cultures, 24 hours apart, from both nose and throat.

Permanent active immunization, with or without prior Schick test from six months on, by three 1 c. c. doses subcutaneous, 5 to 7 days apart of toxin-antitoxin; or one 0.5 c.c. reaction test and two 1 c.c. doses of toxoid, one week apart. Schick test in six months.

Units of antitoxin required in the treatment of a case (Park, Willard Parker Hospital):

	Mild	Moderate
Infants, 10-30 lbs. (under 2 yrs.)....	2,000-3,000	3,000- 5,000
Children, 30-90 lbs. (under 15 yrs.)..	3,000-4,000	4,000-10,000
Adults, over 90 lbs.	3,000-5,000	5,000-10,000

	Severe	Malignant
Infants, 10-30 lbs. (under 2 yrs.) .	6,000-10,000	8,000-10,000
Children, 30-90 lbs. (under 15 yrs.)	10,000-15,000	15,000-20,000
Adults, over 90 lbs.	15,000-20,000	20,000-30,000

When given intravenously one-half the amounts stated. Mild cases subcutaneous, otherwise intramuscular (gluteus) except where immediate neutralization is imperative, then intravenous.

Erysipelas: Concentrated sereptococcus antitoxin for toxemia. Syringe of 5,000 units

(10 c.c.). Dose 10-20 c.c. or more. Convalescent serum—no definite opinion.

Influenza: Prophylactic vaccines, influenza combined, four 1 c. c. bulbs or syringes, of probable value to prevent secondary invasions, but no known specific biologic agent to prevent or to cure, since influenza is an intoxication. Hexamethylanamin 3-5 grs. diluted, t. i. d., quinin, oil eucalyptus, sponging, ice cap or bag, antipyretics, sedatives, sprays, argyrol, neosilvol, steam; care of ears, lungs, bowels; rest, pure air and sun.

Malaria: Prophylaxis by recognition by clinical symptoms and blood examination. Screens. Quinin. Destroy mosquitoes, adult and larvae. Medicinal: Quinin bisulphate, tannate, euquinin in syrups; 3-10 gr., 4-6 hours before paroxysm (in sweating stage); or, under 2 years, 1 gr. every 3 hours, 3-5 years, 2 grs. every 3 hours; 6-10 years, 3 grs. every 3 hours.

Measles: Prophylaxis, passive. Immunization by 5-10 c. c. of convalescent serum or 20-30 c. c. of whole blood of convalescent patients, or of healthy adults who have had measles. Given within 5 days after exposure, attack is averted or modified. Given later and prior to clinical symptoms, modified and permanently immunized. Valuable in institutions. One to three years, within 4 days of exposure 5 c.c. of serum intramuscularly to prevent. Adults within four days of exposure 25 c.c. (75 c.c. blood). One to three years, 5 to 7 days after exposure, 10 c.c. serum. Adults, 5 to 7 days after exposure, 30 to 40 c.c. serum, (75 to 100 c.c. blood). Three years up, within 4 days after exposure, 10 c.c. serum. Protection for 3 to 4 weeks only.

To limit to moderate attack lasting a few hours, use ⅓ to ½ the protective dose, to produce a lasting active immunity.

Active immunization is by inoculation of virus of measles taken from nasal mucus discharge of patients 1 to 2 days before eruption, mixed with normal saline solution. Few drops applied to nasal mucus membrane of healthy infants 4 to 5 months old give few spots on face and body; confer several years of immunity.

Measles toxin from streptococci morbilli injected into horses and rabbits produced an antitoxin more concentrated than convalescent serum. Immune goat serum, as prophylactic, inoculation 4 days after exposure, protected 97%. Available in greater quantities.

Meningitis, Cerebrospinal:

Immunization by vaccines experimental. Withdraw spinal fluid until it issues 4 to 5 drops a minute. Inject polyvalent antimeningococcus serum subdurally early, 5 to 10 c.c. less than amount withdrawn. Under 5 years 20 c.c. probably maximum. Moderate cases, repeat every 12 hours until pyrexia is ended, and spinal fluid clear microscopically. Obstinate, inject into ventricles or cisterna magna.

Intravenous of value theoretically in early stages only (general septicemia), 200 to 600 c.c. Isolate and cultivate organism.

Mumps:

Immunization is produced from blood of donors recovering, recently recovered and those several years ago recovered.

Poliomyelitis:

Immunization of monkeys by vaccination; not practical yet for children. Acute stage: Bed, casts, sand bags, anodynes, alcohol for bed sores. Convalescence: From 4 to 6 weeks from onset; if tenderness is gone, use massage, heat, electricity, and muscle training.

Convalescent serum therapy. Dose is arbitrary; inject 15 to 20 c.c. intraspinally, and twice that intravenously, early.

Rabies:

Prophylactic: Muzzling, detention, examination, quarantine and vaccination of dogs (5 c.c. vial).

Local Treatment.—Clean, bleed, cauterize wound with fuming nitric acid drop by drop, within 24 hours; bone, cartilage, or bloodless tissue, pure carbolic acid instead.

Prophylactic for Humans. Pasteur treatment. Twenty-one daily injections of 2 c.c. each is full adult dose. A 14 dose treatment delivered in two installments at intervals of 4 days for slight exposure remote from brain, superficial, through clothing, or on lower extremities.

Rheumatic Fever, Acute:

Prophylaxis: Avoid cold, damp poorly ventilated insanitary environment. Fresh air, sun, and outdoor exercise.

Tonsillectomy and adenoidectomy.

General Treatment: Rest in bed prolonged.

Heat, gentle rubbing with oil of wintergreen, wrap in cotton, sponging, flannel pajamas, liberal diet.

Sodium salicylate 30 to 60 grains a day in divided doses to child of 5. Aspirin, novaspirin, tolysin, anodynes, sedatives, prolonged convalescence, iron, arsenic, liver. Vaccines and sera, problem not solved.

Scarlet Fever: Prophylaxis. Early diagnosis from symptoms and from Schultz-Charlton skin blanching test (1 c.c. bulbs). Technic like Schick. Immunization, Dick intracutaneous

test to exposed susceptibles (technic like Schick—1 c. c. vial of diluted toxin, 10 tests). Actively immunize for over 18 months, by injecting diluted toxin into triceps three successive weeks; or better, five vials of 500, 2000, 8000, 25,000, and 80,000 skin test doses, at intervals of about five days.

Scarlet fever streptococcus antitoxin, refined and concentrated. One prophylactic dose, by passive immunization, protects contacts for about ten days. 2000 units (100,000 original neutralizing units) in syringe. Objection to use is possible present or future serum sickness; not so liable as formerly.

One sufficiently large early therapeutic dose of 3000 (10-20 c.c.) units, intramuscularly, ordinarily enough. Second or third dose if toxic symptoms recur. Reduce for the very young. For very toxic cases 6000-8000 units, part intramuscularly and part intravenously (desensitize with 0.2 to 0.4 c.c. subcutaneous two hours before—always if intravenous).

Smallpox: Prophylactic immunization by multiple pressure method of vaccination by tangential pricking of cleansed but not irritated skin, 30 times in 5 seconds through a drop of vaccine, ¼-inch area; needle point crosswise, lifted free. Keep vaccine cold, fresh for maximum takes.

Tetanus: Prophylactic immunization of one (better two) injections of 1,500 units tetanus antitoxin, subcutaneous, near wound or main nerve trunk from wound. Children, 40 units per pound of body weight dose, within 7-10 days. Treatment by tetanus antitoxin of adults (child of 50 pounds in parenthesis, computing adult dose of 10,000 units equal to 70 units per pound).

Day	Intraspinally	Intravenously	Subcutaneously
First....	5,000-10,000(3,500)	10,000-(3,500)	
Second..	5,000-10,000(3,500)		
Third ...	5,000-10,000(2,000)		
Fourth...	5,000		5,000-10,000(3,500)

Typhoid Fever: Prophylactic immunization with "Triple Vaccine." Adults one course of three bulbs or three syringes, 0.5 c.c., 1 c.c., 1 c.c., at weekly intervals. Dose for children based on body weight: adults 150 pounds, 50-pound child one-third adult dose.

Upper Respiratory Infections (Common Colds): Theoretically vaccines or biologic treatment not rational, yet clinically may produce immunity for strain injected and are harmless. Catarrhal combined, four 1 c.c. bulbs or syringes in package.

Whooping Cough: Prophylactic immunization. For a year-old infant, inject vaccine subcutaneously early, two thousand million the first dose, four thousand million the second dose and six thousand million the third dose, two or three days apart.

Therapeutic injections: Same technic and dosage as in prophylactic, four to six injections, the last two being eight thousand million and sixteen thousand million. The earlier given, the quicker the improvement in number, severity and duration.

DISCUSSION

Dr. Luther W. Holloway, Jacksonville:

Fortunately all of the acute infectious diseases encountered in infants and children in Florida are milder in their manifestations than in more northern climes.

The diseases which especially interest us are, scarlet fever, diphtheria and cerebro-spinal meningitis, the latter occurring sporadically.

With regard to scarlet fever, I would like to urge the use of scarlet fever antitoxin early in all cases, whether mild or severe. There is some difference of opinion regarding its use in mild cases. However, all authorities agree that its use is indicated in the severe or toxic cases. Some of the apparently mild cases have the worst complications, and no one can say when they will appear. We have seen the complications, otitis media, mastoiditis, acute suppurative adenitis, cardiac and kidney involvement, in cases so mild at the onset that the antitoxin was not given.

Ninety per cent of the recipients of serum have reactions of one degree or another, but this should not deter us from using a remedy which is so helpful in quickly improving the patient's condition, shortening convalescence and preventing complications. During the last five years with its early use in the attack, the complications have been reduced to a minimum.

Diphtheria should be treated early with one large dose of antitoxin, and the results should be excellent.

We have a means by which we can protect the children from diphtheria. The administration of toxin-antitoxin by the end of the first year will protect most of the little patients from diphtheria. They should be tested, however, at the end of six months following the injections to ascertain if they are immune.

The question of meningitis has been one of very vital interest to the medical profession in Jacksonville on account of the high mortality incident to this disease. Our mortality has been nearly one hundred per cent. There are many strains of meningococci, and the serum, which we

have been using, is not sufficiently polyvalent to cover the numerous strains, so I think our State Board of Health should look into this matter, and see why our mortality is so high as compared with other centers, where they lose only forty to fifty per cent.

Dr. Lucile Spire Blachly, Jacksonville:

I shall not attempt to discuss this paper from the standpoint of the practicing physician. It has been five or six years since I practiced medicine. Usually I have attended the annual meetings of the State and National Associations, at which times I have heard the contagious diseases discussed and it seems to me that each year there is something new being brought out. As a public health worker, I have hopes that it will not be long until we will have accurate means of preventing most, if not all, of them. I do want to say a word in this connection: It is my task as director of the Bureau of Child Hygiene to get the parents to have the children vaccinated and immunized, and I have found that the first obstacle that confronts us is the lack of agreement on the part of the State Public Health Department, the City Health Department, the County Medical Societies and the individual doctors, as to just when we shall vaccinate or immunize, and how much. If we could all agree on some definite plan as to the age at which a child should be vaccinated against smallpox and at what age the child should be immunized against diphtheria, etc., and this information could be printed on a slip of paper—a very small slip of paper would do—have this signed by the representative heads of the State Board of Health, the State Medical Association and the City Health Departments, and these made available to all the community leaders of the state—I dare say it would not be long until all of the children in the State would have had these vaccinations and immunizations.

Whenever a parent finds two authorities are not agreed as to what ought to be done, there immediately enters the question of postponing, what, to them, is a doubtful or perhaps a painful or serious matter.

I thank you.

Dr. W. A. Claxton, Melbourne:

There are one or two things I would like to mention in connection with the use of vaccines and serums by local doctors and various health officers.

There is a mistaken idea that toxin-antitoxin gives immediate immunity. I recall a case of diphtheria where the suggestion was made by a local practitioner that we give toxin-antitoxin immediately. Now, we all know that toxin-antitoxin does not give immunity for perhaps four to six months. It is consequently not an emergency measure, and, therefore, should not be considered so.

The next thing is the question of using fresh vaccine and serum. In my travels throughout the State I go to drug stores in small towns and find that the serums and vaccines furnished fresh by the State Board of Health to the druggist for distribution have been off the ice for months, and have consequently lost potency. Now, if a case of diphtheria develops and the doctor rushes to the drug store and gets this diphtheria antitoxin he relies on it to save the child. If the child does not live the fault may be that the material which the doctor got at the drug store was not fresh and was not potent. It is the duty of the local doctors to see that their druggist does keep this material properly, does keep it on ice, and does furnish it fresh.

In the matter of smallpox vaccine, we find the same thing prevailing. Smallpox vaccine deteriorates very rapidly. If you leave it around the office for four days the potency is gone. You vaccinate a number of individuals and get no takes and so the work has to be done all over again to be effective.

Dr. McKibben, Miami (closing):

I want to emphasize one point that Dr. Holloway brought up about scarlet fever. There has been a difference in opinion as to when to use the serum. Up in Massachusetts they have found it advisable to use it as a routine. They formed this conclusion because it reduced, not only the mortality, but the complications as well. It increased the resistance of the child so that there were fewer complications.

To reiterate what Dr. Holloway said about the treatment of meningitis. In some of our cases we got, by airmail, serum from New York and Atlanta, thinking the different sera might give different results. But our results have been just about the same as he had in Jacksonville. Up in Massachusetts we formerly got a mortality of 25%. In Miami City Hospital the few patients we had during my three months' service last winter died. In other words, the results obtained from the New York and Atlanta sera coincided with the results they experienced in those two respective cities. This probably means that epidemic cerebro-spinal meningitis was most virulent with them as with us here in Florida.

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REGISTRATION OF DOCTORS

The Florida State Board of Health has recently published the list of practitioners of medicine who registered for 1929. This is a list of all the registered doctors who hold licenses to practice medicine in the State of Florida and will be a valuable guide to the medical profession of the state. In addition to the names and addresses, the telephone numbers are given. These may be used to advantage in making station-to-station telephone calls, thereby reducing the cost of calls. The Bureau of Vital Statistics is to be congratulated on the compilation of this list.

A WORD FROM THE PRESIDENT

The remarks made at the health conference which was held at the call of Governor Doyle Carlton, express my views as to the objectives of the State Medical Association. You may observe from this, the main objective is in educating

NOW our legislators so we will know before our next state meeting at Orlando those who are in favor of any legislation proposed in the interest of the medical profession. I can no better state to the councilors and presidents of the various county medical societies our aims and objects than to give in full my address before that meeting:

Obligation of the Florida Medical Association in Rural Health Conservation

I believe that the medical profession of the State of Florida realizes its individual and collective responsibilities in the matter of promoting public health. In a state famous for its exposition of the superlative in modern civilization, we should be rid of the waste and inefficiency due to disease.

Let us figure for a moment the partial cost to the State of Florida of preventable deaths due to the lack of appropriation of funds for the activities of the State Board of Health for laboratory facilities and the maintenance of additional trained workers in the field. There were 470 deaths in 1929 from malaria, a preventable disease. Thus estimating each life worth $5,000, we would have a loss of $2,350,000. Further estimating, there are two hundred cases of malaria for each death and for each case there is an average of 5 days total disability, considered at a minimum average of $1.00 per day earning capacity giving us a cost of $470,000. This amount added to the death cost would give a total of $2,820,000 for malaria alone. The loss to the state of mothers during childbirth for 1928 was 280. Two thousand deaths of infants under one year and premature births and deaths from injury at birth totalling 669 were also recorded during that year. These figures are appalling when we realize that 50 per cent of these deaths were due to ignorance, negligence or poverty and the majority of cases due to negligence may be properly classed under ignorance. This reveals that much educational work is needed under the department of child hygiene and public health nursing.

The obligation of the Florida Medical Association toward the conservation of human life, as I see it, is:

First: We must endeavor to educate our state legislators as to the necessity of the appropriation of sufficient funds for the State Board of Health to place as many health units throughout the state as they deem necessary to cope with the situation.

Second: We should further cooperate by aiding in every way possible the State Board of Health in carrying out its program.

Third: As an association we should inform our communities as to the vastly improved and more beneficial services which our health departments can render adequately supported. This may be done through the columns of the newspapers and magazines, the lecture platform, the pulpit, the school and every other agency of publicity, to spread the propaganda against disease. Fathers and mothers can easily be interested in any campaign in the name of health on behalf of their children. The people should not have the prevailing attitude towards doctors that puts a premium on disease rather than health, that a doctor is just an expert to be called in an emergency rather than a promoter of health.

Fourth: We should cooperate with the health units in conducting physical examinations of the school children. Conducting free clinics for the examination of children before school age, for the treatment of children unable to employ a physician and the removal of physical defects prejudicial to health.

Fifth: We should educate the laity and again our legislators as to the difference between the well-trained physician and the cults. They should be further taught that no medical or scientific achievement has ever originated with the cults. Many of our preventable deaths are due to patients falling into the hands of the cults until the last ray of hope is gone. This will continue to go on until we can establish laws, as in the Basic Science Act, that will require an examination in the fundamental principles of disease before any school is permitted a license to practice its method of healing. To a layman, a doctor is just a doctor regardless of whether he has had ten years of training or a short course from a mail order house or a mercenary school teaching only spinal manipulation.

Let me say in conclusion that if our legislators were endowed with the keen insight and sense of duty to our health program as our Honorable Governor Carlton, there would be no occasion for this meeting here today and this state of ours would be outstanding in health, happiness and prosperity.

ANNUAL MEETING OF THE CHATTAHOOCHEE VALLEY MEDICAL AND SURGICAL ASSOCIATION

The Chattahoochee Valley Medical and Surgical Association will meet this year in Albany, Ga., July 8-9, 1930. Albany is in the heart of the great industrial and agricultural section of South Georgia. This territory holds within its borders many of the substantial and progressive members of our profession who are always ready to lend their presence to a medical gathering when the program offers helpful suggestions concerning the problems met in their daily labors. Within easy reach by train and automobile are the physicians of Southern Alabama, Northern Florida, the valley of the Chattahoochee and the larger cities of Georgia and contiguous States. A record breaking attendance at Albany is expected and may be attained if the friends of the Chattahoochee Valley Association will but bestir themselves. The services of this unique organization, shorn of medical politics, presenting a paucity of frills and furbelows and always rich in medical meat and good fellowship, have long been felt in the territory bordering on the Chattahoochee Valley. Its place cannot be filled by other splendid meetings of our profession and its past labors are too rich in helpful results to permit of its neglect. We have many medical meetings, to be sure, but this one is true and tried and like a good friend should be "grappled to our souls with hoops of steel." Is it too much then to ask that all physicians, wherever located, interested in the promulgation of medical art and the cultivation of closer cooperation through strengthening influences of social contacts, be requested to reserve Tuesday and Wednesday, July 8-9, 1930, for this meeting, to the end that we may have a creditable gathering to hear and participate in this year's program. It is being prepared with the sole idea of giving to those so situated as to be unable to keep abreast with the rapid advances in medicine, a practical resume of the past year's contributions to our profession. Membership in the Association is secured through registration at the annual session. Reputable men, wherever located, are eligible. You are invited to attend. Come and give to the meeting the result of your own experiences and in turn learn of those of your fellows.

DISCUSSION

(Continued from page 546)

Dr. Henry Hanson, Jacksonville:

It has been many years since I have attempted to do anything along the line of work which Dr. Royce has presented here today. But, I can emphasize the importance of what he has presented. It is a great satisfaction to the surgeon, to the physician, and to the general practitioner to have a detailed study of tissues removed at operation for future reference.

I might also mention an experience which I had while doing pathology some years ago. A case was admitted to the Milwaukee County Hospital during the summer of 1909, presenting confusing symptoms leaving diagnosis in doubt until autopsy. All symptoms seemed to point to the man's back. The man finally died. Before that, however, I made some blood studies revealing an anemia with a color index plus one, and nucleated reds. Internists there were thinking of some tumor in the spinal cord. At autopsy a scirrhus carcinoma involving the entire pyloric end of the stomach, was found, with extensive metastasis throughout all mesenteric glands.

Now, we had another case of carcinoma about the same time. The man came in presenting a picture of anemia. Blood analysis, however, did not show pernicious anemia, but did show a very high white count, and also showed on differential count about 230 nucleated reds to each 500 white cells. That just illustrates what you do find when you follow your cases with an analysis and blood examination. And it is very important for you surgeons, when presenting tissue to the pathologist, that you do not leave out some small piece, only sending in the larger ones—but send in everything that you have removed at operation and give the pathologist a chance to thoroughly analyze that specimen and see whether or not you do find at examination the thing that patient actually has. I think that is very clearly illustrated where you have a patient with a diagnosis of carcinoma of the breast and on study you find that it is one of these cases of mastitis where malignancy has not yet established itself.

I thank you.

Dr. Royce, Jacksonville (concluding):

I have nothing further to add.

STATE NEWS ITEMS

On May 12th the postal inspectors arrested an impostor, manipulating under the name of Dr. T. C. Whitehurst, in Tampa. It appears that Whitehurst had an old regular Board license No. 961, issued on December 23, 1915. When Whitehurst made application to the State Board of Health for his annual registration certificate the data submitted were referred to Dr. Wm. M. Rowlett, Secretary of the Board of Medical Examiners, for his okeh, which is the usual routine in issuing the certificates. Dr. Rowlett, in verifying the data submitted, discovered that license No. 961 was issued on December 23, 1915, to Dr. Sam S. Wilson, of Ozona, Florida. The records also showed that Dr. Wilson died some three years ago. The original license had been secured from Dr. Wilson's daughter, who now resides in Tampa.

Upon investigating the records of the Clerk of the Circuit Court of Hillsborough County, it was found that Dr. Wilson's name had been erased from the record and the name of "Tyree C. Whitehurst" inserted in the place of Dr. Wilson. It was also discovered that the index of the record book had not been changed and shows that Dr. Wilson had recorded the license shown on that page on the above date.

This is merely an illustration of the lengths to which some impostors will go in order to defraud the profession and the public. It also demonstrates the benefits to be derived from the annual registration law, giving both the Medical Examining Board and the State Board of Health a double check upon practitioners of the state.

* * *

Dr. William B. Clark, formerly of Atlanta, is now associated with Dr. A. H. Freeman of Ocala. Dr. Clark is a native Floridian and is a graduate of Emory University. He spent several years as interne in the Grady Hospital, Atlanta.

* * *

Dr. T. Allen Jones of Holopaw has relinquished his practice and gone to Asheville, N. C., for a six months' residence. Dr. Wood of Pinecastle has moved to Holopaw, taking Dr. Jones' place.

* * *

Columbia County Medical Society had as its guests physicians from Live Oak, Jasper and Wellborn at a special meeting held May 12th. An hour was devoted to viewing motion pictures of experimental laboratory work and abdominal anatomy.

* * *

Dr. T. C. Davison of Atlanta was recently the guest of the Pasco-Hernando-Citrus County Medical Society.

* * *

Dr. S. G. Hollingsworth of Bradenton has been appointed by Governor Carlton a member of the State Board of Medical Examiners.

* * *

Weems Hospital at Sebring is now equipped to do X-ray work.

* * *

Dr. Louis Orr announces the removal of his offices from 11 Lucerne Circle to 309 Exchange Building, Orlando.

* * *

Drs. Herbert L. Bryans and J. M. Hoffman of Pensacola have become associated in practice with offices at 21-21½ Wright St.

* * *

Drs. R. W. Blackmar and B. F. Woolsey of Jacksonville announce their separation as associates. New addresses will be: Dr. Blackmar, 321 St. James Building and Dr. Woolsey, 320 St. James Building.

* * *

Dr. Edward Jelks, Jacksonville, has been appointed councilor of the Southern Medical Association from Florida, the appointment having been made recently by the president of the Association, Dr. Hugh S. Cumming, Washington, D. C. Dr. Jelks succeeds Dr. H. Marshall Taylor, Jacksonville, whose term had expired and who having served the maximum time permitted under the Constitution was not eligible for reappointment. The Council acts as a Board of Censors and Executive Committee and is composed of one physician from each southern state comprising the Association. The term of a councilor is three years, an equal number expiring each year.

* * *

Dr. Henry Hanson, State Health Officer, and Dr. Noble A. Upchurch, City Health Officer of Jacksonville, have been honored by being named Fellows of the American Public Health Association.

WILLIAM ANDREW JACKSON POLLOCK, JR.

Dr. W. A. J. Pollock, Jr., was born at Cuthbert, Ga., April 12, 1870, and died at Pensacola, March 5, 1930. He attended the Atlanta Medical College from which he graduated in 1894. After graduation he located in Apalachicola where he practiced his profession for two years. In 1896 he moved to Pensacola where he was married and continued in active practice until his sudden death.

Dr. Pollock was a member of the staff of the Pensacola Hospital, Escambia County Medical Society and the Florida Medical Association. He is survived by his widow, Mrs. Virginia Sanchez Pollock, and one daughter, Mrs. Edwina Pollock Gladden, and two grandchildren.

The following resolution was spread upon the minutes of the Escambia County Medical Society.

"Whereas, it has pleased Almighty God in His infinite wisdom to remove from our midst our beloved friend and brother, Dr. W. A. J. Pollock, Jr., and

"Whereas, we, the members of the Escambia County Medical Society feel deeply the loss of our brother and former vice-president of this Society, and

"Whereas, his high ideals and valued counsel, the result of years of conscientious effort, will be greatly missed by our members,

"Therefore, be it resolved that the members of the Escambia County Medical Society express their sorrow in the passing of Doctor Pollock; that a copy of this resolution be entered on the minutes of this Society; that a copy be sent to members of his family and that the same be published in the Journal of the Florida Medical Association and in the local press.

HERBERT L. BRYANS, M.D.
J. H. PIERPONT, M.D.
Committee.

The United States Civil Service Commission announces an open competitive examination for senior medical technician (pathology). Applications must be on file with the Civil Service Commission at Washington, D. C., not later than July 9, 1930. The examination is to fill vacancies in the office of the Surgeon General, War Department, for duty in Washington, D. C., and in positions requiring similar qualifications. The entrance salary is $2,000 a year. Higher-salaried positions are filled through promotion. Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or from the Secretary of the United States Civil Service Board of Examiners at the post office in any city.

* * *

Dr. C. M. Sandusky of Jacksonville was recently appointed as an associate in the ear, nose and throat service of the medical staff of Duval County Hospital.

* * *

The fifty-fifth annual commencement exercises of St. Luke's Hospital Training School were held Thursday, May 15th. The following young ladies received diplomas: Marguerite Mae Ervin, Mamie Mackery Leitch, Georgia Ann Pope, Gwynelle Breazeale, Rebah Katherine Waldron, Mary Lee Cochran, Martha Rivers Smith, Marguerite Heitman, Ruth Murray, Sarah Agnes Appleby, Rosa Lamar Collins, Eunice Viola Johnson, Ruth Moore, and Susye Helen Smith.

* * *

Dr. Henry Hanson, State Health Officer, recently spent some time in Madison County, supervising the hookworm demonstrations given by officials of the State Board of Health. He was accompanied by Mr. E. C. Stoy, United States Public Health Service executive, who has been detailed to the State Board of Health to assist in county health unit development.

* * *

Dr. Lewis W. Glatzau of DeLand will spend a year in Vienna, Austria, where he will attend the University of Vienna. He sailed on June 14th. Dr. Glatzau will do post-graduate work in eye, ear, nose and throat.

* * *

FOR SALE—Physiotherapy Equipment in perfect condition. One Standard Junior High Frequency Machine. Original price, $600.00; sale price, $300.00. One Burdick Combination Air and Water Cooled Lamp, self-contained water cooled unit, De Luxe type. Original price, $1,200.00; sale price, $600.00. One Morse Wave Generator. Original price, $425.00; sale price, $200.00. Complete Office Equipment, including Surgical Instruments. If interested write Mrs. C. W. Love, Box 505, Lakeland, Fla.

FOR SALE—McDanold surgical and gynecological office chair with all attachments, in first-class condition. Worth $50.00. $30.00 buys it. Write G. R. Maner, M.D., 5111 Central Avenue, Tampa, Florida.

THE WOMAN'S AUXILIARY PAGE

WOMAN'S AUXILIARY
TO THE
FLORIDA MEDICAL ASSOCIATION, INC.

State Editor
Mrs. Edward Jelks,
2244 St. Johns Avenue
Jacksonville

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A MESSAGE FROM THE STATE PRESIDENT

Mrs. J. Ralston Wells

Through the courtesy of the Editor and the Business Manager of the Journal of the Florida Medical Association, the Woman's Auxiliary has been granted space in this official publication. We are grateful to them for their kindness and hope to merit their confidence, but we can make a success of this new venture only if we have the interest and cooperation of all our members.

Mrs. Edward Jelks, Jacksonville, is the first State Editor and we expect great things from her. She must have news from you so everything of interest to one person may be of interest to us all. Please send her all news items of your local activities. While our primary interest is in the work being done in Florida, we hope to present to you, from month to month, news of the splendid work being accomplished by the National Organization, and to offer for your attention, programs and projects sponsored by its officers.

We have just closed a successful year in Florida. When I assumed office as President at the close of the Pensacola Convention, I found the affairs of our organization in excellent condition. A spreading interest in our aims and accomplishments is manifest and as I enter upon the work of the coming year, I feel an enthusiastic and strengthened belief in the entirely worth while objects of our association and in their successful consummation.

We women are primarily allied to the medical profession. Its struggles, aims, and future are ours. In this over-organized age, why should not our first interest be that association, the prime object of which is the furtherance of the aims of that glorious profession, medicine; the cementing of friendship, fellowship, and confidence among its members and their families; and the extension of its message to other organizations which look to the advancement of health and education? Such opportunities for service are offered by the Woman's Auxiliary to the American Medical Association. It is my earnest hope that more women in our State will avail themselves of the pleasures and privileges that result from membership in our organization. With the enthusiastic interest and cooperation of the eligible women of Florida, our State Auxiliary should be able to come to the front in its record of accomplishment, and stand shoulder to shoulder with our men.

Our work is not for personal glory, but if we can aid in keeping organized medicine free from personal internal disagreements by furthering good fellowship the various prevalent cults will find an added barrier to their attacks.

I intend to inaugurate a vigorous campaign for the Auxiliary this year, so I hope the summer may bring rest and recreation to all of you and the fall months find you refreshed and ready for work.

* * *

Marion County Organized.

We are happy to announce that the Woman's Auxiliary to the Marion County Medical Society was organized in Ocala, May 12, with the assistance of the State Hygeia Chairman, Mrs. Hermann H. Harris, Jacksonville. The following officers were elected:

President—Mrs. H. C. Dozier, Ocala.
Vice-President—Mrs. A. H. Freeman.
Secretary—Mrs. T. H. Wallis.
Treasurer—Mrs. W. B. Clark.

Hygeia

If every woman would get her husband to place a subscription to Hygeia through the County Auxiliary, she would not only help the treasury of her society, but increase the circulation of an

excellent magazine. The State Hygeia Chairman is Mrs. Hermann H. Harris, 2547 St. Johns Ave., Jacksonville.

Public Relations

The Chairman of the Committee on Public Relations is Mrs. Julius C. Davis, Quincy. Activities of medical interest of all clubs, federations, charities, and other organizations, are of interest to her, and we should keep her informed, as she will us, of the trend of such affairs and how they may be influenced for the good of the public and the advancement of medical science.

Other appointments will be announced later.

Any member of an Auxiliary who is planning to attend the meeting of the American Medical Association in Detroit, June 23-27, will please communicate with Mrs. J. Ralston Wells, 988 S. Peninsula Drive, Daytona Beach.

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid
		Date	Time	Place	Luncheon?	
Alachua	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay	Don S. Fraser, M.D., Panama City.					50%
Brevard	I. K. Hicks, M.D., Melbourne.	Varies		Varies		90%
Broward	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	75%
Columbia	T. H. Bates, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		64%
Dade	E. N. McKenzie, M.D., Miami.	1st Friday	8:30 P.M.	Club Room, Huntington Bldg.	Occasionally.	77%
DeSoto-Hardee-Highlands	H. V. Weems, M.D., Sebring.		8:00 P.M.	Varies	Yes.	87%
Duval	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Chamber of Commerce Building	No.	68%
Escambia	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	69%
Hamilton	J. R. Bruce, M.D., Jasper.					100%
Hillsboro	J. T. Cowart, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	Tampa Municipal Hospital	No.	79%
Jackson	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	64%
Lake	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	100%
Lee	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	93%
Leon-Gadsden-Liberty-Wakulla-Jefferson	J. B. Brinson, Jr., M.D., Monticello.	Quarterly	3:00 P.M.	Varies	Yes.	85%
Madison	Geo. O. Davis, M.D., Madison.					
Manatee	A. Q. English, M.D., Manatee.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	92%
Marion	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	80%
Monroe	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	67%
Palm Beach	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	66%
Pasco-Hernando-Citrus	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	92%
Pinellas	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	69%
Polk	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	94%
Putnam	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	60%
St. Johns	A. C. Walkup, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	85%
St. Lucie-Okeechobee-Indian River-Martin	C. L. Davis, M.D., Okeechobee.	3rd Thursday	8:00 P.M.	Varies	Yes.	100%
Sarasota	F. C. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	75%
Seminole	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		100%
Sumter	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee	W. C. White, M.D., Live Oak.					67%
Taylor	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	60%
Volusia	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	78%
Walton-Okaloosa	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-Holmes	H. A. McClure, M.D., Chipley.					56%

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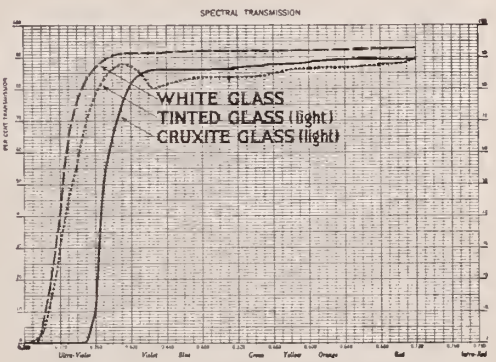
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1 teaspoonful whole mixed spices					
½ teaspoon salt, ½ cup vinegar					
½ cup chopped cahhage	50	1		3	
½ cup chopped celery	60	1		2	
¼ cup canned green peas	40	1		4	
¼ cup cooked beets, cuhed	40	1		3	
Total	10		12	88	
One serving	2		2	15	

Soak gelatine in cold water for five minutes. Bring to hoil water, salt and spices. Pour on gelatine to dissolve it and add vinegar. When jelly is nearly set, stir in the vegetables, pour into mold and chill until firm. Unmold on lettuce and serve with salad dressing. Garnish with sprig of parsley or strip of pimento.

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	Grams	Prot.	Fat	Carh.	Cal.
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¼ cup cold chicken broth or water					
1¼ cups hoiling chicken hroth, fat free					
½ teaspoon salt					
Pinch pepper					
1 cup cooked chicken, cuhed	125	24	20		
¼ cup cream, whipped	55	1	22	1.5	
Total	31	44	1.5	526	
One serving	5	7		88	

Soak gelatine in cold liquid for five minutes and dissolve in hot hroth. Season with salt and pepper and chill until nearly set. Fold in chicken and whipped cream. Turn into molds and chill until firm. Serve on lettuce or garnish with parsley and strip of pimento.

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TUBERCULOUS ulceration of the intestines is a common complication of pulmonary tuberculosis. It is probably a terminal phenomenon in the majority of cases of chronic phthisis. A review of the literature contributed by experienced clinicians, seems to indicate that in from 50 to 75 per cent of the cases the diagnosis of intestinal involvement, in cases of pulmonary tuberculosis, is missed. The reason for this is that nearly all symptoms and signs, including the roentgenological findings usually considered diagnostic, are highly unreliable. In a series of 199 necropsies performed in Montefiore Hospital in New York, and reported by M. Maxim Steinbach, about 63 per cent showed more or less extensive involvement of the intestines. Of these, not more than 38.6 per cent were diagnosed during the life of the patient though careful watch for the complication was constantly maintained. Abstracts from Dr. Steinbach's report and comment follow:

INTESTINAL TUBERCULOSIS

While it is possible for the intestine to become involved in a generalized tuberculous infection, in most instances the condition is secondary to pulmonary tuberculosis, and is caused by the swal-

(*Continued on page* 580)

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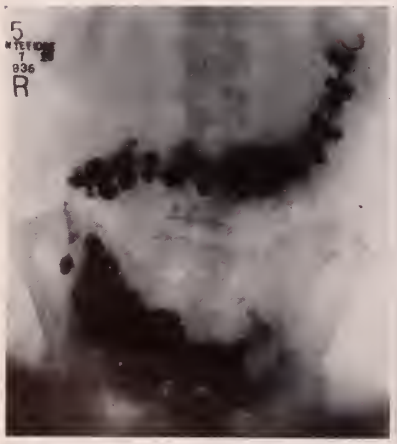
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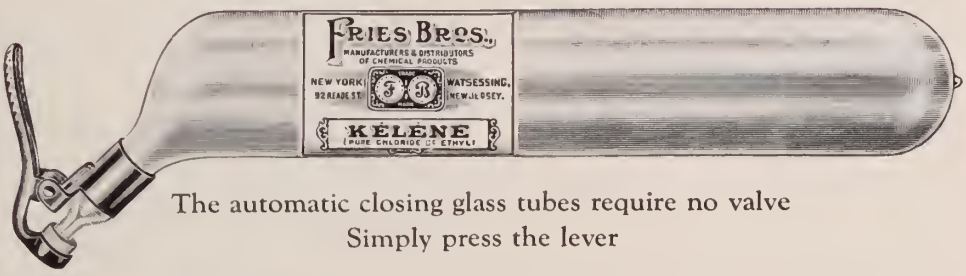


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lowing of tuberculous sputum or by hematogenous deposit. The earliest and most usual distribution of lesions is in the region of the ileocaecal valve. Other portions of the bowel may become involved later, though tuberculosis of the stomach is exceedingly rare. Common symptoms and signs are diarrhea, constipation, cramp and tenderness. Sometimes a mass may be felt in the ileocaecal region. In general, the findings, while suggestive, are not sufficiently clear cut to warrant an exact diagnosis.

STIERLIN'S TECHNIQUE

Stierlin in 1911 described roentgen-ray findings which he believed to be definitely diagnostic of intestinal tuberculosis. He gave two glasses of a liquid bismuth meal and took roentgenographs after 6, 8 and 24 hours. In tuberculous involvement of the intestine, the caecum and ascending colon revealed no shadows whereas the terminal ileum and transverse colon were filled. The explanation he gave for this is that as the result of the ulceration in the ileocaecal region, irritability and motility are increased and the bismuth is quickly passed along. In some cases, Stierlin found a partially filled portion of the colon with fine marbling or long-drawn-out shadows which he attributed to the retention of bismuth by the ulcerations. Studies made subsequently by others discount somewhat the reliability of Stierlin's sign, as it may occur in any ulcerative or indurative changes in the caecum, which Stierlin himself admitted. On the other hand, the sign is lacking very often in cases of tuberculosis in that region of the gut.

TRUDEAU STUDIES

Brown and Sampson applied Stierlin's technique and in an early publication reported 39 cases diagnosed by the roentgenograph, of which 38 were corroborated by surgical exploration of the abdomen. In a later monograph on this subject, published in 1926, they state:

(*Continued on page* 582)



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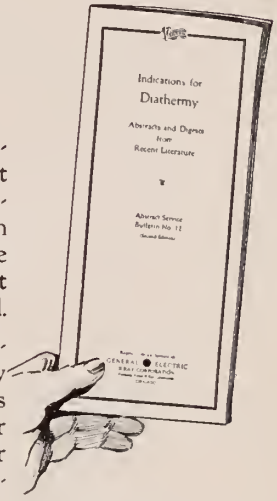


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A preliminary survey of the articles on diathermy, published during the past year or so, is available to you in the form of a 64-page booklet entitled "Indications for Diathermy." In this booklet you will find over 250 abstracts and extracts from articles by American and foreign authorities, including references to more than a hundred conditions, in the treatment of which the use of diathermy is discussed.

If you number yourself among the physicians who have not adopted diathermy in practice, and desire to investigate this form of therapy in view of reaching your own conclusion as to its value in your practice, you will find this booklet a convenient reference. A copy will be sent on request.



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MONTEFIORE STUDIES

Encouraged by the work of Brown and Sampson, Steinbach studied during the past six years, 273 cases at Montefiore Hospital, of which 71 cases came to necropsy. Four cases were excluded because of faulty technique, leaving 67 cases in which it was possible to correlate the roentgen findings with those of necropsy. Care was taken to excise, wash and inspect the intestinal mucosa as lesions are often confined to the mucosa and submucosa and are not visible through the serosa. Often the ulcerations are found only after microscopic search. The 67 cases thus correlated are divided into two groups: Group I embracing those in which roentgen and necropsy findings were in agreement, and Group II those in which they did not agree. The results are tabulated as follows:

Group I. Thirty-two cases of agreement between roentgen and necropsy findings

Roentgen and necropsy findings both positive	20 cases
Roentgen suggestively positive, necropsy positive	5 "
Roentgen negative, necropsy negative	7 "
	32 "

(*Continued on page* 584)

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Group II. Thirty-five cases of disagreement between roentgen and necropsy findings

Roentgen positive, necropsy negative..	3	cases
Roentgen negative, necropsy positive..	18	"
Roentgen indefinite, necropsy positive..	6	"
Ronetgen indefinite, necropsy negative.	4	"
Roentgen negative, necropsy showing lesions in small gut only.....	4	"
	35	"

WHY FINDINGS DISAGREE

Special investigations were made to discover why in certain cases the roentgen and necropsy findings did not agree. After citing specifically several case histories, the author concludes that "these cases illustrate that defect in filling of caecum and ascending colon, associated with hypermotility, is not always pathognomonic of tuberculous colitis, but may be present in other conditions of the large and small intestines in which there is irritability resulting in diarrhea. Fishberg enumerates the commonest causes of diarrhea in tuberculous patients as follows: (1) intestinal ulceration, (2) intestinal catarrh, (3) dietetic errors, (4) amyloid degeneration, (5) swallowing of sputum, and (6) toxemia. It is easy to see that any one of these above enumerated causes may produce the classical clinical signs of tuberculous enteritis without the presence of intestinal ulceration."

Conversely he finds that, "absence of hypermotility and defect in filling does not exclude tuberculous colitis or enteritis or a combination of the two."

CONCLUSIONS

The final conclusion is that "on the basis of 67 cases of far-advanced pulmonary tuberculosis, studied clinically, roentgenologically and at autopsy in relation to a diagnosis of tuberculous ulceration of the intestines, we have found that the roentgenological signs usually considered diagnostic of this condition were highly unreliable in over 52 per cent of our cases."—*Comparative Radiographic and Anatomical Studies of Intestinal Tuberculosis. M. Maxim Steinbach, Am. Rev. of Tuberculosis, January, 1930.*

(This review secured by the Florida Public Health Association from the National Tuberculosis Association).

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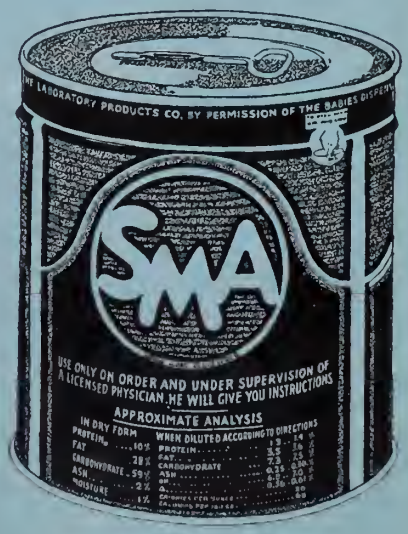
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